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Data for December 1975–November 1975

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Solar - Geophysical Data

NO. 377 JANUARY 1976

Part I (Prompt Reports)

DATA FOR
DECEMBER 1975
NOVEMBER 1975

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BOULDER, COLORADO

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No. 377

Issued in two parts

Hope I. Leighton, Editor

J. Virginia Lincoln, Director
Solar - Terrestrial Data Services Division

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Note: A = Part I, B = Part II.

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ALERT PERIODS

INTERNATIONAL URSIGRAM
AND WORLD DAYS SERVICE

DECEMBER 1975

PRESTO MESSAGES (THE RAPID REPORT OF MAJOR EVENTS)

BOULDER 26/1430Z WEAK MAGSTORM IN PROGRESS 26/1430Z.

SUMMARY OF THE GEOALERT WWA MESSAGES

Message serial number	Date of issue	Date of observation	Wolf number	10 cm solar flux	A index	Active Regions: Location Lat-Long	Flares: Total	Flares: M	Flares: X	Outstanding events	Forecasts: Date	Forecasts: Location Lat-Long	Forecasts: Desc*	Alert Situations
335	1	30	00	73	27	-	0	0	0		1	SPOTNIL		SOLQUIET MAGALERT MINOR 01/02
336	2	1	12	74	30	N07E39	0	0	0		2	N07E39	Q	SOLQUIET MAGALERT MINOR 02
337	3	2	28	77	20	N06E25 N05E19 S00E17	0 0 0	0 0 0	0 0 0		3	N06E23 N05E17 S00E15	Q Q Q	SOLQUIET MAGALERT MINOR 03/03
338	4	3	29	76	12	N07E10 N06E05	0 1	0 0	0 0		4	N07E10 N06E05	Q Q	SOLQUIET MAGNIL
339	5	4	49	76	14	N06W03 N05W08	0 0	0 0	0 0		5	N06W04 N05W09	Q Q	SOLQUIET MAGQUIET
340	6	5	33	80	07	N05W16	0	0	0		6	N05W16	Q	SOLQUIET MAGALERT MINOR 06/08
341	7	6	17	78	07	N06W29	2	0	0		7	N06W29	Q	SOLQUIET MAGNIL
342	8	7	18	76	03	N07W43	3	0	0		8	N07W43	Q	SOLQUIET MAGQUIET
343	9	8	18	78	13	N06W58	1	0	0		9	N06W58	Q	SOLQUIET MAGQUIET
344	10	9	10	76	13	N06W79	0	0	0		10	N06W80	Q	SOLQUIET MAGQUIET
345	11	10	00	76	05	-	0	0	0		11	SPOTNIL		SOLQUIET MAGQUIET
346	12	11	00	77	04	-	0	0	0		12	SPOTNIL		SOLQUIET MAGQUIET
347	13	12	00	76	03	-	0	0	0		13	SPOTNIL		SOLQUIET MAGQUIET
348	14	13	00	75	02	-	0	0	0		14	SPOTNIL		SOLQUIET MAGQUIET
349	15	14	12	74	04	S08E28	0	0	0		15	S08E28	Q	SOLQUIET MAGQUIET
350	16	15	18	74	06	S06E13	0	0	0		16	S06E13	Q	SOLQUIET MAGQUIET
351	17	16	16	73	11	S06E02	0	0	0		17	S06E02	Q	SOLQUIET MAGQUIET
352	18	17	17	73	08	S06W11	0	0	0		18	S06W11	Q	SOLQUIET MAGQUIET
353	19	18	12	72	05	S06W23	0	0	0		19	S06W23	Q	SOLQUIET MAGQUIET
354	20	19	00	71	03	-	0	0	0		20	SPOTNIL		SOLQUIET MAGQUIET
355	21	20	00	72	03	-	0	0	0		21	SPOTNIL		SOLQUIET MAGQUIET
356	22	21	00	71	06	-	0	0	0		22	SPOTNIL		SOLQUIET MAGQUIET
357	23	22	00	71	08	-	0	0	0		23	SPOTNIL		SOLQUIET MAGQUIET
358	24	23	00	72	05	-	0	0	0		24	-		SOLQUIET MAGQUIET
359	25	24	34	74	02	S10W25 S12W15 S04E75	0 0 0	0 0 0	0 0 0		25	S10W25 S12W15 S04E75	Q Q Q	SOLQUIET MAGALERT 26/29
360	26	25	13	73	15	S04E53	0	0	0		26	S04E53	Q	SOLQUIET MAGALERT 26/29
361	27	26	11	74	30	S04E40	0	0	0		27	S04E40	Q	SOLQUIET MAGALERT 27/29
362	28	27	00	75	24	-	0	0	0		28	SPOTNIL		SOLQUIET MAGALERT 28/29
363	29	28	00	74	11	-	0	0	0		29	SPOTNIL		SOLQUIET MAGALERT 29
364	30	29	00	75	12	-	0	0	0		30	SPOTNIL		SOLQUIET MAGNIL
365	31	30	00	74	10	-	0	0	0		31	SPOTNIL		SOLQUIET MAGQUIET
001	1	31	00	75	05	-	0	0	0		1	SPOTNIL		SOLQUIET MAGQUIET

RELATIVE SUNSPOT NUMBERS

ZURICH, R_z

1975 PROVISIONAL

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	30	0	0	0	26	7	23	37	14	15	0	7
2	30	22	?	0	33	11	18	36	16	8	0	23
3	28	28	14	0	29	8	22	46	19	9	7	20
4	19	27	11	0	28	7	22	78	29	10	18	26
5	18	20	14	21	28	7	23	93	25	8	22	22
6	23	26	14	0	20	7	33	104	24	10	27	18
7	32	34	7	15	16	0	23	102	24	9	30	22
8	29	29	18	17	0	0	19	89	23	16	30	18
9	37	22	19	9	0	0	16	83	17	15	30	8
10	31	18	20	13	9	0	23	80	10	8	22	0
11	30	13	20	0	0	9	29	72	10	8	30	0
12	31	18	15	0	0	0	33	45	16	8	24	0
13	32	9	15	0	0	0	49	52	25	16	20	0
14	11	8	17	0	7	0	44	34	17	30	28	0
15	20	8	18	0	7	8	43	31	8	23	27	0
16	17	8	30	0	8	19	39	26	14	19	30	7
17	16	0	30	0	0	17	23	19	14	8	32	8
18	20	0	24	0	8	12	29	16	18	18	37	8
19	20	0	20	0	0	16	36	8	13	16	31	7
20	18	7	16	0	0	0	26	22	30	12	36	0
21	16	8	9	0	0	7	30	23	27	7	36	0
22	16	0	0	0	8	0	27	0	23	0	26	0
23	15	0	0	7	8	12	19	8	0	0	12	0
24	7	12	0	8	7	20	33	8	0	7	10	18
25	7	9	0	7	0	24	33	11	0	0	8	14
26	7	8	13	7	0	33	30	16	0	0	7	8
27	0	8	7	26	7	38	29	18	0	0	0	0
28	7	8	0	19	13	36	26	10	0	0	0	0
29	7		0	16	0	23	20	10	0	0	0	0
30	7		7	20	0	22	27	21	7	0	0	0
31	0		8		8		34	21		0		0
MEAN	18.7	11.6	12.0	6.2	8.7	11.4	28.3	39.3	14.1	9.0	19.3	7.5

1974 yearly mean = 34.5

DAILY SOLAR SOLAR FLUX AT 2800 MHz
OTTAWA ARO

FLUX ADJUSTED TO 1 A.U., S_a

1975

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	78.1	70.8	70.7	70.2	76.3	71.4	78.7	91.6	87.0	76.4	70.4	72.1
2	75.8	72.3	72.4	71.2	81.1	73.0	76.8	95.4	87.9	78.1	71.4	74.8
3	77.1	74.3	73.4	72.2	79.6	70.8	77.1*	97.0*	87.8	78.4	73.0	74.3
4	74.4	75.4	72.8	73.0	79.6	70.4	76.8	104.6	92.8	76.3	75.4	74.1
5	73.7	76.5	71.3	73.7	78.4	69.3	76.8	107.9	94.4	76.1	78.9	77.4
6	73.8	81.1	72.4	73.7	75.9	69.2	76.1	120.6*	94.0	75.1	80.1	75.8
7	75.7	79.4	71.9	74.3	73.6	68.1	74.1	123.2	91.1	74.3	80.5	73.7
8	77.7	78.8	72.5	73.6	71.9	67.5	74.0	123.7	88.5	74.0	80.9	76.0
9	79.9	77.1	73.8	73.4	70.6	67.7	73.3	115.9	84.3	75.4	78.8	73.3
10	80.5	76.7	73.3	72.4	70.1	68.8	73.0	116.5	82.5	74.3	78.9	73.3
11	81.2	74.8	73.0	72.3	69.8	68.1	77.6	107.3	81.1	73.3	78.6	74.3
12	82.4	74.9	74.2	70.8	69.6	68.4	82.7	104.5*	78.2*	74.8	79.9	73.4
13	80.4	73.7	75.6*	70.7	69.1	67.9	88.5*	98.0	75.2	79.0	79.2	72.8
14	77.7	72.0	75.0	69.7	68.7	68.5	89.0	90.9*	74.2	80.0	82.7	71.8
15	77.4	69.7	73.4	69.7	68.0	68.9	85.6	86.0	74.1	80.3	83.7	71.8
16	76.5	71.4	76.0	69.2	68.5	71.4	83.6	82.8	74.3	78.5	87.6	70.5
17	74.7	69.3	75.3	69.6	68.3	70.2	81.2	79.0	74.8	78.9	88.9	70.5
18	75.8	68.3	74.2	68.3	68.7	70.2	82.8	76.4	76.2	79.2	90.8*	69.6
19	74.1	70.0	72.9	67.5	68.9	71.0	81.9	76.7	76.2	78.0	93.0*	69.1
20	73.8	69.5	71.9	68.0	68.6	72.5	83.3	77.2	76.5	77.1	90.9	69.7
21	74.5	68.9	71.2	68.2	69.7	68.7	83.1	80.0	76.7	75.7	86.6	69.0
22	73.6	68.3	69.3	67.8	70.8	69.9	82.7	78.5	75.3	74.2	81.5	68.9
23	72.7	68.3	67.6	68.7	70.6	72.9	82.0	76.8	76.1	74.3	77.2	69.6
24	71.0	68.6	67.4	69.3	70.6	75.9	79.3	77.0	76.8	72.7*	74.7	71.4
25	70.3	69.4	67.5	71.6	70.2	77.7	79.8	80.6	76.7	72.1	73.7	71.3
26	70.5	68.8	68.6	72.1	69.0	79.8	80.0	81.3	76.7	71.9	71.9	71.8
27	70.1	69.4	67.3	74.4	70.5	81.5	78.5	83.6	75.7	72.1	70.7	72.5
28	70.7	68.6	67.8	74.8	73.6	80.7	76.5	83.3	76.1	71.7	70.4	71.5
29	70.4		69.0	73.2	71.0	79.4	75.5	84.7	75.9	72.8	70.9	72.5
30	70.5		69.0	73.4	71.0	78.8	78.9	86.2	75.8	70.2	70.6	71.9
31	70.1		70.5		71.1		81.9*	86.7		69.9		72.1
MEAN	75.0	72.4	71.7	71.2	71.6	71.9	79.7	92.7	80.4	75.3	79.1	72.3

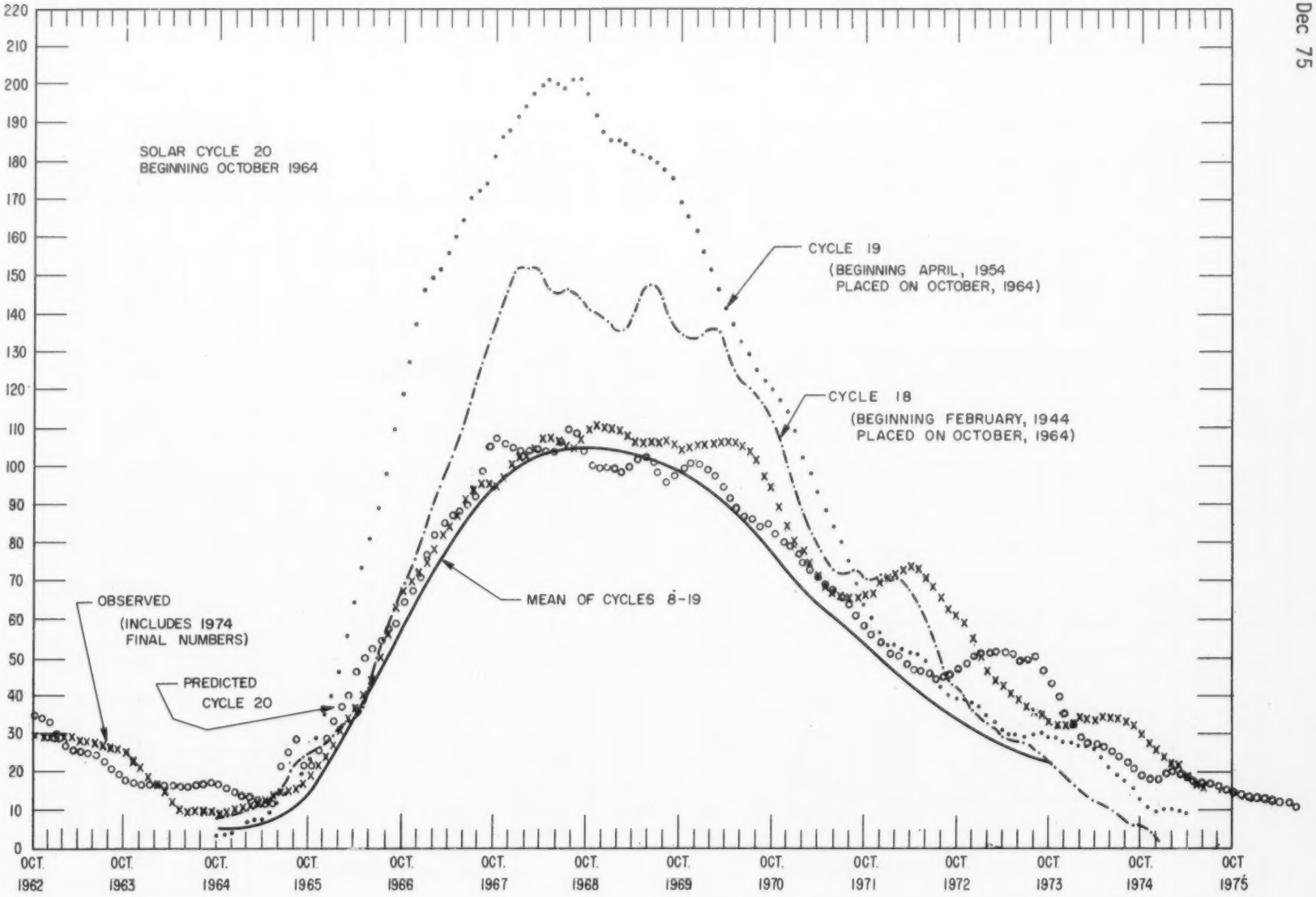
* adjusted for burst

DAILY SOLAR INDICES

DECEMBER 1975

DEC 1975	YEAR DAY	BARTELS 27-DAY CYCLE NUMBER	SUNSPOT NUMBERS		OBSERVED FLUX	SOLAR FLUX ADJUSTED TO 1 A.U.								
			R_Z	$R_{A'}$	OTTAWA 2800	AFCRL 15400	AFCRL 8800	AFCRL 4995	OTTAWA 2800	AFCRL 2695	AFCRL 1415	AFCRL 606	AFCRL 410	AFCRL 245
1	335	12	7	6	74.2	528	276	116	72.1	71.0	48.5	38.1	23.4	9.0
2	336	13	23	23	77.0	528	274	118	74.8	73.1	48.3	37.4	22.8	9.1
3	337	14	20	20	76.5	524	273	117	74.3	72.7	49.2	38.4	22.8	8.6
4	338	15	26	23	76.3	523	276	117	74.1	73.4	48.9	38.3	22.6	8.5
5	339	16	22	21	79.7	531	275	119	77.4	75.8	51.7	37.9	22.4	9.4
6	340	17	18	19	78.1	525	270	118	75.8	73.5	51.4	38.0	22.1	8.3
7	341	18	22	18	76.0	528	273	118	73.7	73.0	51.1	39.7	22.6	9.1
8	342	19	18	12	78.3	529	276	118	76.0	73.8	52.1	40.1	23.7	9.2
9	343	20	8	8	75.6	531	274	119	73.3	73.1	51.3	39.5	23.5	8.4
10	344	21	0	3	75.6	532	273	118	73.3	72.3	51.3	39.7	23.4	8.7
11	345	22	0	0	76.7	529	272	118	74.3	72.5	50.6	40.2	22.4	8.6
12	346	23	0	0	75.7	529	275	118	73.4	72.1			23.2	8.8
13	347	24	0	0	75.1	525	270	116	72.8	70.5	50.2	40.1	23.0	8.9
14	348	25	0	3	74.1	523	268	117	71.8	70.2	49.6	40.1	22.2	9.3
15	349	26	0	3	74.1	520	267	116	71.8	69.4	49.7	39.8	23.2	9.5
16	350	27	7	4	72.8	518	271	114	70.5	69.5	48.7	39.7	22.0	9.6
17	351	1	8	8	72.8	522	273	114	70.5	69.2	48.3	40.5	24.5	11.0
18	352	2	8	3	71.9	523	273	113	69.6	68.5	48.0	40.0	24.0	9.7
19	353	3	7	3	71.4	519	274	112	69.1	68.3	48.6	39.2	22.9	9.5
20	354	4	0	0	72.0	521	280	114	69.7	69.4	50.2	39.9	24.5	9.9
21	355	5	0	0	71.3	522			69.0		48.2	40.0	22.7	9.2
22	356	6	0	0	71.2	523	274	114	68.9	68.4	49.0	39.1	22.4	9.2
23	357	7	0	0	72.0	523	270	113	69.6	67.9	46.8	36.5	20.9	8.9
24	358	8	18	12	73.8	523	277	115	71.4	70.9	47.6	36.1	23.5	8.0
25	359	9	14	11	73.4	521	276	114	71.0	71.1	47.6	35.5	22.4	9.2
26	360	10	8	5	74.2	520	275	117	71.8	71.0	49.0	37.4	21.5	8.1
27	361	11	0	0	75.0	520	275	120	72.5	71.2	51.0	37.9	20.7	8.0
28	362	12	0	0	73.9	524	273	116	71.5	70.7	49.3	38.3	20.7	7.7
29	363	13	0	0	75.0	524	274	119	72.5	72.0	50.1	38.7	23.7	8.0
30	364	14	0	1	74.4	522	270	116	71.9	71.5	51.1	38.7	23.2	7.6
31	365	15	0	0	74.6	521	271	116	72.1	70.7	49.5	38.3	21.0	7.3
MEAN			7.5	6.6	74.6	524	273	116	72.3	71.2	49.6	38.8	22.7	8.8

* Adjusted for burst.



PREDICTED AND OBSERVED SUNSPOT NUMBERS

SMOOTHED OBSERVED AND PREDICTED SUNSPOT NUMBERS
CYCLE 20

MONTH	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1964										9.6	10.2	11.3
1965	11.7	12.0	12.5	13.6	14.6	15.0	15.5	16.4	17.4	19.7	22.3	24.5
1966	27.7	31.3	34.5	37.4	40.7	44.6	50.3	56.6	63.1	67.6	70.2	72.7
1967	75.0	78.0	82.2	84.6	87.4	91.3	94.1	95.3	95.3	95.0	97.1	100.6
1968	102.6	102.9	104.7	107.2	107.6	106.6	105.2	104.0	107.0	109.9	110.6	110.1
1969	110.0	109.6	108.0	106.4	106.2	106.1	105.8	106.4	105.4	104.1	104.6	104.9
1970	105.6	106.0	106.2	106.1	105.8	105.3	103.8	101.0	97.2	93.9	89.4	84.1
1971	80.4	77.8	74.4	70.9	68.1	66.7	65.4	64.6	65.8	66.2	66.8	69.4
1972	70.8	71.2	72.4	73.4	72.9	70.5	68.2	65.5	62.2	60.6	58.7	55.1
1973	50.9	46.5	44.2	42.7	40.7	39.1	37.5	36.1	34.4	32.6	31.8	31.5
1974	32.7	34.4	34.0	33.9	34.6	34.5	34.0	33.1	32.1	30.3	27.6	25.2
1975	23.9	22.2	21.3	18.6	16.9	16.0	15.3 (2.)	14.7 (5.)	14.2 (7.)	13.7 (9.)	13.3 (--)	12.9 (--)
1976	12.5 (--)	12.1 (--)	11.7 (--)	11.3 (--)	11.0 (--)	10.7 (--)	10.4 (--)					

For each month, the upper figure is the observed or predicted Zürich smoothed sunspot number. The lower figure in parenthesis is the corresponding absolute value of the 90% prediction interval, an indication of the uncertainty above and below the predicted number. Observed numbers are those with no prediction intervals. The observed smoothed sunspot numbers are based on final Zürich numbers through 1974.

The predicted sunspot numbers are derived from a regression analysis based on cycles 8 through 19. Tests indicate that earlier cycles are from a different statistical population. From July 1968 - February 1970 a regression analysis based on cycles 1 through 19 was used because it had not then been proven that two populations exist.

Hα SOLAR FLARES

DECEMBER 1975

OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IM-POR-TANCE	OBS.		MEASUREMENTS			REMARKS
	DATE DBC	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	NOAA PLAGE REGION	CMP. DAY	MIN.		CORD.	TYPE	TIME — UT	MEAS. AREA Millionths of Disk	CORR. AREA Sq. Deg.	
MANI	03	0429E	0429U	0440D	N02	E14	.279		4.2	110	SF	3	V	0429	60	.6	U
MITK	03	0439E		0447	N02	E13	.264		4.2	80	SN		P	0439	60	.6	E
BOUL	04	2031	2033	2040	N 4	W 0	.177		4.9	9	SF	2	C	2033	117	1.2	
MCMA	05	1620	1623	1632	N03	W17	.331	13964	4.4	12	SF		C	1623	25	.3	D
MCMA	06	1740		1754D	N03	W32	.549	13964	4.3	140	SN		C	1747	35	.4	EL
BOUL	06	1741	1745	1750	N 4	W32	.553		4.3	9	SF	1	C	1745	32	.4	
PALE	06	1743	1746	1747	N 5	W32	.558		4.3	4	SF	3	C		16		DE
MANI	07	0136E	0144U	0150	N05	W37	.625		4.3	140	SN	3	P	0144	50	.6	H
MITK	07	0606		0609D	N05	W40	.663		4.3	30	SN		P	0609	90	1.2	D
MANI	07	0608E	0609U	0614D	N06	W39	.654		4.3	60	SN	3	V	0609	40	.5	H
CATA	07	1140	1140	1145	N05	W43	.700		4.3	5	SN	1		1140	56	.8	
RAMY	08	1418E	1418U	1433	N 5	W52	.800		4.7	150	SF	3	C		144		FDE
RAMY	08	1418E	1419U	1423D	N 6	W52	.803	13964	4.7	50	1F	3	V		256		DE
MCMA	10	1727E		1753D	N03	W88	1.000	13964	4.1	260	SF		C	1730			DH
ARCE	11	0926E		0944D	N06	W90	1.000		4.6	180	SN		C	0927	58		
CATA	15	0925	0935	0940D	S06	E20	.340		16.9	150	SN	1		0935	56	.6	
CATA	23	1030	1035	1045	S04	E90	1.000	13992	2.2	15	1F	1		1035	56		
BOUL	24	1943	1946	2008	S12	W29	.485		22.6	25	SF	2	C	1946	42	.5	

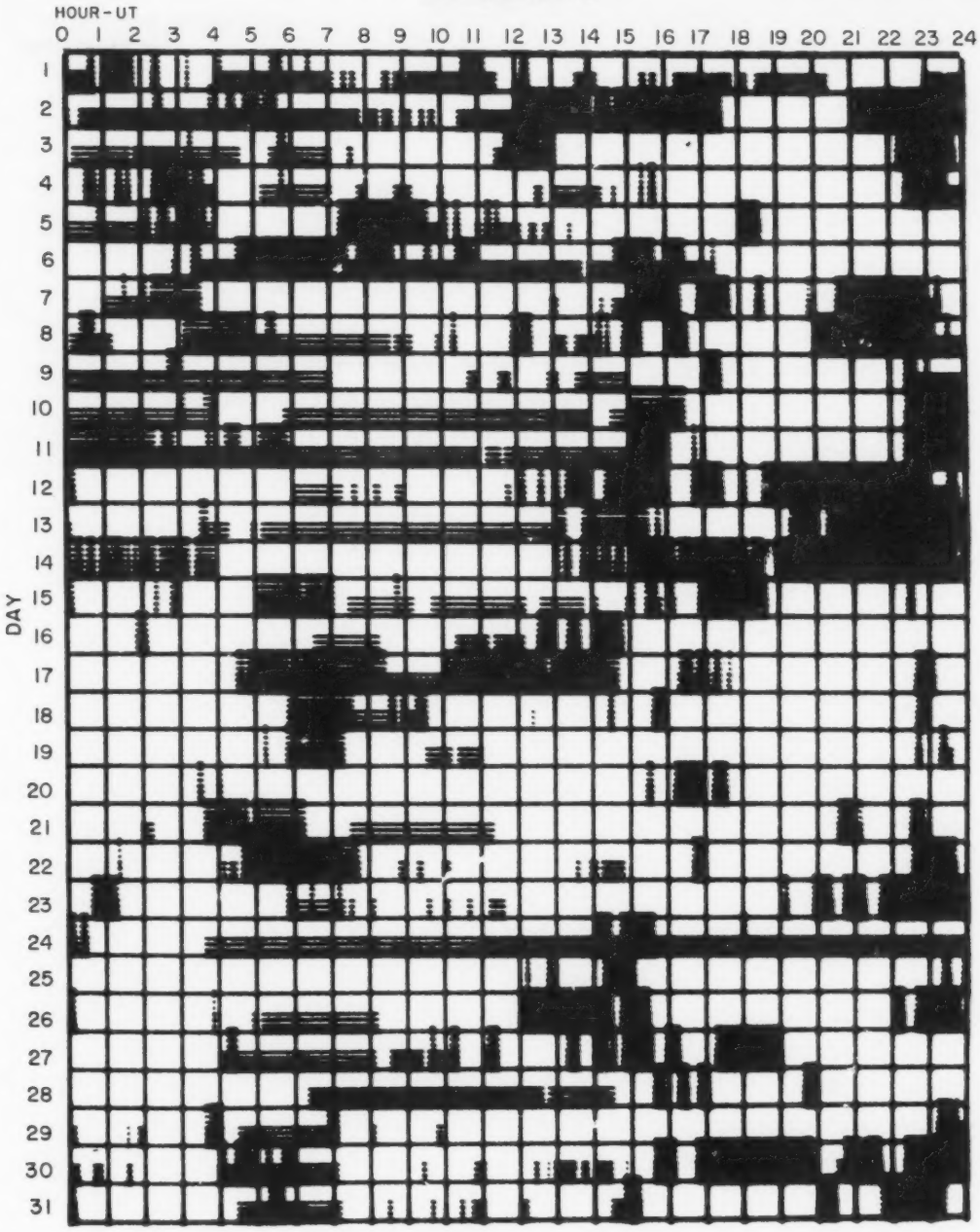
"Remarks":

A = Eruptive prominence whose base is less than 90° from central meridian.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No visible spots in the neighborhood.
H = Flare accompanied by a high speed dark filament.
I = Active region very extended.
J = Distinct variations of plage intensity before or after the flare.
K = Several intensity maxima.
L = Existing filaments show signs of sudden activity.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the calcium II lines H and K.
P = Flare shows helium D_3 in emission.
Q = Flare shows the Balmer continuum in emission.
R = Marked asymmetry in Hα line suggests ejection of high velocity material.
S = Brightness follows disappearance of filament (same position).
T = Region active all day.
U = Two bright branches, parallel (||) or converging (Y).
V = Occurrence of an explosive phase: important and abrupt expansion in about a minute with or without important intensity increase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide Hα line.
Y = System of loop-type prominences.
Z = Major sunspot umbra covered by flare.

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

DECEMBER 1975



Observatories included in total patrol:

Arcetri	Catania	Lvov	Mitaka	Tehran
Athenes	Herstmonceux	Manila	Palehua	Upice
Boulder	Hurbanovo	McMath-Hulbert	Ramey	Wendelstein
Bucharest	Istanboul			

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

12
Dec 75

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATION

DECEMBER 1975

Nançay **169 MHz**

5

Note: No noise centers were observed on 169 MHz at Nancay except on December 5, 1975.

Center at W0.27 solar radius
Diameter = 0.38 solar radius
Flux = 17 x 10^{-22} $Wm^{-2}Hz^{-1}$

10

15

20

25

30

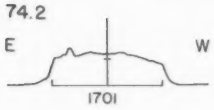
E C W

EAST - WEST SOLAR SCANS

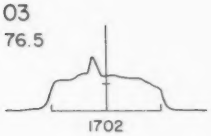
December 1975

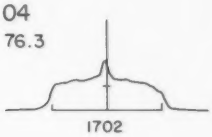
ALGONQUIN RADIO OBSERVATORY
CANADA

10.7 cm.
Fan Beam with 1.5 minutes of arc
E - W Resolution

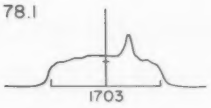
01
74.2


02
77.0

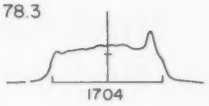
03
76.5


04
76.3


05
79.7

06
78.1


07
76.0

08
78.3


09
75.6

10
75.6

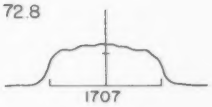
11
76.7

12
75.7

13
NO
DATA

14
NO
DATA

15
NO
DATA

16
72.8


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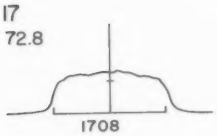

18
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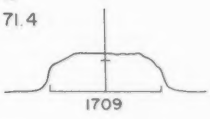
DATA

19
71.4


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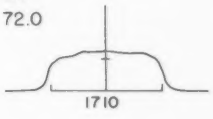

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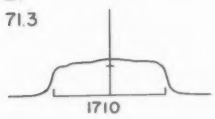

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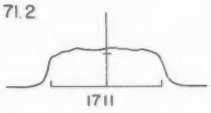

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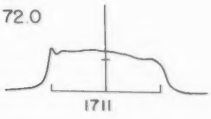

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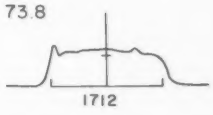

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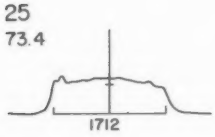

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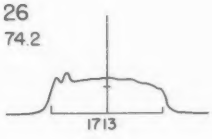

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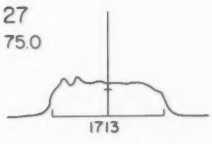

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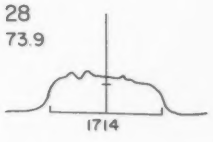

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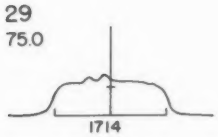

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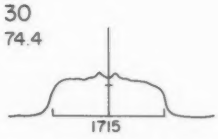

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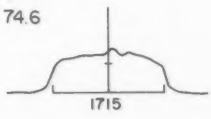

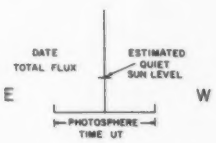

"DATA FOR EAST–WEST SOLAR SCANS AT 21CM
NOT RECEIVED AT TIME OF PUBLICATION."

"DATA FOR EAST–WEST SOLAR SCANS AT 43CM NOT RECEIVED AT TIME OF PUBLICATION."

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

DECEMBER 1975

	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
4	2800	OTTA	24O R	1702	1720	18	1.2	0.6		
	2800	OTTA	24P R	1720		220 D	1.2			
5	8800	MANI	4 S/F	0743.5	0750	35.5	24.5	11.2		
	2695	MANI	4 S/F	0743.1	0748.6	34.9	19.6	5.6		
	2800	OTTA	20 GRF	1900	1918	50	1.2	0.6		
6	2800	OTTA	20 GRF	1740	1746	20	0.8	0.4		
8	2800	OTTA	27 RF	1330		380	4	3		
	2800	OTTA	24 R	1330	1355	25	4	2		
	2800	OTTA	24P R	1355		185	4			
	2800	OTTA	26 FAL	1700	1950	170	-2	-1		
23	2695	BOUL	1 S	1936.5	1937	2.5	3	1		
24	2800	OTTA	27 RF	1740		135	0.8	0.7		
	2800	OTTA	24 R	1740	1745	5	0.8	0.4		
	2800	OTTA	24P R	1745		120	0.8			
	2800	OTTA	26 FAL	1945	1955	10	-0.8	-0.4		
25	2695	BOUL	1 S	1937	1938.5	2.5	4	1		
31	2695	BOUL	45 C	1839.5	1841.5	5	2	1		
	2695	BOUL	1 S	1940.5	1942.5	2.5	2	1		

Observatories:

BOUL = Boulder MANI = Manila OTTA = Ottawa ARO PENT = Penticton SGMR = Sagamore Hill

Explanation of Type Code:

1 Simple 1
2 Simple 1F
3 Simple 2
4 Simple 2F
5 Simple
6 Minor
7 Minor +
8 Spike
20 Simple 3
21 Simple 3A
22 Simple 3F
23 Simple 3AF
24 Rise
25 Rise A
26 Fall
27 Rise and Fall
28 Precursor
29 Post Burst Increase
30 Post Burst Increase A
31 Post Burst Decrease
32 Absorption
40 Fluctuation
41 Group of Bursts
42 Series of Bursts
43 Onset of Noise Storm
44 Noise Storm in Progress
45 Complex
46 Complex F
47 Great Burst
48 Major
49 Major +

SOLAR WIND

Interplanetary Scintillations

DECEMBER 1975

UCSD 74 MHZ SCINTILLATIONS

DAY	3C48 VEL	ERR	3C144 VEL	ERR	3C147 VEL	ERR	3C161 VEL	ERR	3C237 VEL	ERR	3C273 VEL	ERR	3C298 VEL	ERR	3C459 VEL	ERR
1	358	15											342	26		
2													891	243		
4											499	72	927	253		
6	366	26									575	107	625	169	294	*
7	298	43									537	151			206	40
8							348	*			367	101	474	45	364	45
9											451	42	485	63		
10	280	20														
11	236	50														
12	361	42														
13	340	90									450	129	469	94		
14	277	29													252	61
16	221	45									569	126	413	55		
17	256	13											301	55		
18	281	47											419	95		
21	269	100									545	162			236	13
22	267	*									581	132			234	12
23	331	40									485	84	423	166		
24	196	*											415	89	264	21
25	290	17					426	*			447	107	489	30	442	18
26	394	23			512	*	431	*	482	*	603	128	719	118	762	84
27	388	34									852	252	855	154		
28													859	78		
29	453	47													495	46
30	361	58														
31	428	56											699	180		

DECEMBER	5				15				25			
	UT	LAT	DIST	DLON	UT	LAT	DIST	DLON	UT	LAT	DIST	DLON
3C48	5.	6.	1.24	-7.	4.	5.	1.21	-9.	4.	4.	1.17	-11.
3C144	9.	0.	1.30	2.	8.	-1.	1.30	0.	7.	-2.	1.30	-2.
3C147	8.	5.	1.27	4.	7.	4.	1.28	1.	7.	3.	1.27	-1.
3C161	10.	-7.	1.25	4.	10.	-7.	1.26	2.	9.	-8.	1.27	-0.
3C237	14.	-2.	1.10	15.	13.	-3.	1.15	14.	12.	-4.	1.19	12.
3C273	16.	0.	0.93	22.	15.	-1.	0.98	17.	14.	-2.	1.04	17.
3C298	18.	13.	0.73	41.	17.	8.	0.83	33.	16.	3.	0.91	24.
3C459	2.	4.	1.06	-15.	2.	3.	1.03	-16.	1.	2.	0.98	-17.

* indicates data for which no error estimate is available, because only two antennas were operating.

PIONEER VI

DECEMBER 1975

Date 1975	DSN Coverage (UT)	Data Time (UT)	ESP (°)	SOLAR WIND AMES[1] U_{H^+} (km/sec)†	AMES[1] TAU (days)	MIT U_{H^+} (km/sec)	MIT N_{H^+} (H^+/cc)	COSMIC RAY PROTONS[2] (particles/sec) 6-13 (Mev*)	13-175 (Mev**)	>175 (Mev)
16	1105-1244	1100	084.8	361.	6.8	352.	33.8	0.53	0.12	1.28
		1200		339.		352.	28.2	.52	.12	1.31
		1300		339.		350.	30.3	.48	.1	1.21

[1] Wolfe - NASA/ARC
[2] Simpson - University of Chicago

* Includes He 0.6-13 Mev/nucleons and electrons ∿0.5 Mev - see J. Retzler and J. A. Simpson, J. Geophys. Res., 74, 9, 2149-2160, 1969 for discussion of the electron response of Pioneer VII.

** Includes He >13 Mev/nucleons.
Q Used to indicate that a rate is at its quiescent level.

ESP = Earth-Sun Probe Angle.

† Peak velocity.

Note: Data sampled hourly unless otherwise noted.

Note: December 16, 1975 was the tenth anniversary of this vehicle.
All instruments on the spacecraft except the magnetometer are operational.

SOLAR X-RAYS BY SATELLITE
SMS GOES

DECEMBER 1975

.5 - 4Å Hourly Averages (10^{-6} watts/m^2)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
12/ 1	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	B	B	B	B	B	B	B
12/ 2	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
12/ 3	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	.06	B	B	B	B	B
12/ 4	B	B	B	B	B	B	B	B	B	B	B	M	M	M	M	B	B	B	B	.03	B	M	B	.03	B
12/ 5	.03	B	B	B	B	B	M	M	M	M	M	M	M	M	M	B	B	B	B	B	B	B	B	B	B
12/ 6	B	B	B	B	B	.21	.31	B	B	B	B	B	B	B	B	B	B	B	B	.06	B	B	B	B	.01
12/ 7	B	B	B	B	B	B	B	B	M	M	B	B	B	B	B	B	B	B	B	.06	B	B	B	B	B
12/ 8	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	.03	B	B	B	B	B
12/ 9	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	B	B
12/10	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	B	B	B	B	B	B
12/11	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
12/12	B	B	B	B	M	M	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	B	B
12/13	B	B	B	M	B	B	B	B	B	M	M	M	M	M	M	M	M	M	M	M	B	M	M	B	B
12/14	B	B	B	B	B	B	B	B	B	M	M	M	M	M	M	M	M	M	M	B	B	B	B	B	B
12/15	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	B	B	B	B	B	B
12/16	B	B	B	B	B	B	B	B	B	B	B	M	B	B	B	B	B	B	B	B	B	B	B	B	B
12/17	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
12/18	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	M	M	M	B	B
12/19	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	B
12/20	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	M	M	M	B	B	B	B	B	B
12/21	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	M	B
12/22	M	M	M	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
12/23	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	B	B
12/24	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
12/25	B	B	B	M	B	B	B	B	B	M	B	B	B	B	B	B	M	M	B	B	B	B	B	B	B
12/26	B	B	B	B	B	B	B	M	M	M	M	M	M	M	M	B	B	B	B	B	B	M	B	B	B
12/27	B	B	M	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	.06	B	B	B	B	B
12/28	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	.11	B	B	B	B	B
12/29	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
12/30	B	B	B	B	B	B	B	M	M	M	M	M	M	M	M	B	B	B	B	B	B	B	B	B	B
12/31	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	M	B	B	B	B

Note: "B" indicates the flux was below the cut-off levels.
"M" denotes periods of missing data.

SOLAR X-RAYS BY SATELLITE
SMS GOES
DECEMBER 1975

1 - 8Å Hourly Averages (10^{-5} watts/m^2)

YD DA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
12/ 1	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	B	B	B	B	B	B	B
12/ 2	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
12/ 3	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	0.07	B	B	B	B	B
12/ 4	B	B	B	B	B	B	B	B	B	B	B	M	M	M	M	B	B	B	B	0.03	B	M	B	B	B
12/ 5	0.01	B	B	B	B	B	M	M	M	M	M	M	M	M	M	B	B	B	B	B	B	B	B	B	B
12/ 6	B	B	B	B	B	0.03	B	B	B	B	B	B	B	B	B	B	B	B	B	0.06	B	B	B	B	B
12/ 7	B	B	B	B	B	B	B	B	M	M	B	B	B	B	B	B	B	B	B	0.05	B	B	B	B	B
12/ 8	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	0.04	B	B	B	B	B
12/ 9	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	B	B
12/10	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	B	B	B	B	B	B
12/11	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
12/12	B	B	B	B	M	M	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	B	B
12/13	B	B	B	M	B	B	B	B	B	M	M	M	M	M	M	M	M	M	M	M	B	M	M	B	B
12/14	B	B	B	B	B	B	B	B	B	M	M	M	M	M	M	M	M	M	M	B	B	B	B	B	B
12/15	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	B	B	B	B	B	B
12/16	B	B	B	B	B	B	B	B	B	B	B	M	B	B	B	B	B	B	B	B	B	B	B	B	B
12/17	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
12/18	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	M	M	M	B	B
12/19	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	B
12/20	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	M	M	M	B	B	B	B	B	B
12/21	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	M	B
12/22	M	M	M	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
12/23	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	B	B
12/24	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
12/25	B	B	B	M	B	B	B	B	B	M	B	B	B	B	B	B	M	M	B	B	B	B	B	B	B
12/26	B	B	B	B	B	B	B	M	M	M	M	M	M	M	M	B	B	B	B	B	B	M	B	B	B
12/27	B	B	M	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	0.07	B	B	B	B	B
12/28	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	0.11	B	B	B	B	B
12/29	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
12/30	B	B	B	B	B	B	B	M	M	M	M	M	M	M	M	B	B	B	B	B	B	B	B	B	B
12/31	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	M	B	B	B	B

Note: "B" indicates the flux was below the cut-off levels.
"M" denotes periods of missing data.

Note: No events were observed in December 1975.

INFERRED IP MAGNETIC FIELD

BARTELS ROTATION	DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1901	JUL 23	TA	A*	TA	A*	T	A*	T	A	A	A	A	A	A	T	A*	TA	T	T	T	A	A	A	TA	A	T	-	AT	A	T	T	T	T	T	T	T	T	T	A	T	A	TA	-
1902	AUG 19	A	-	A	-	A	A	A	A	A	A	A	A	A	A	TA	T	A	A	A	A	A	A	A	A	T	T	A	A	A	A	A	A	T	T	T	T	T	T	T	TA	A	A	TA	T	A	A	A	A	TA	A	A	-
1903	SEP 15	A	A	TA	T*	A	A	A	A	A	A	AT	A	A	A	A	T	T	A	AT	A	A	A	A	-	A	-	A	-	A	-	A	-	A	T	T	T	T	T	T	T	T	A	-	T	T	T	A	AT	A	TA	A	A	T
1904	OCT 12	T	T	A	-	TA	-	A	A*	A	T	A	T	TA	T	A	A	A	A	A	T	TA	A	TA	A	AT	A	A	T	AT	T	T	A	AT	A	T	T	T	T	A	T	TA	*	A	A
1905	NOV 8	A	A	T	A	AT	A	AT	AT	TA	AT	T	AT	A	T	TA	T*	A	A	A	A	A	A*	TA	AT	A	A	A	A	TA	AT	T	T	A	T	A	TA	T	A	T	A	T	AT	T	A	TA	A	A	A	A	A	AT	AT	T	T
1906	DEC 5	T	T	T	T	TA	AT	T	-	T	-	T	T	T	T	A	AT	A	-	TA	T	TA	T	A	A	AT	-	A	-	A	T	T	TA	A	A	T	T	T	T	T	T	T	A	A*	A	T	T	T	T	T	T	T	TA	AT	TA	T
1907	1973 JAN 1	T	T	T	T	T	T	T	T	TA	T	T	T	A	T	AT	-	A	AT	A	T	A	-	AT	-	A	TA	A	A	A	A	A	A	A	A	A	A	T	T	A	-	T	-	T	T	T	-	TA	T	T	-	T	T	T	T
1908	JAN 28	T	T	A	A	T	T	TA	T	AT	T	T	T	T	T	A	T	A	A	A	A	TA	A	A	A	A	A	AT	T	TA	A	AT	A	TA	A	AT	AT	-	A	A	A	A	T	T	T	AT	T	T	T	T	T	T	T	T
1909	FEB 24	AT	T	AT	T	AT	TA	AT	T	T	T	T	-	AT	TA	AT	A	T	A	T	T	A	A	A	A	A	A	A	AT	TA	A	AT	A	A	A	A	AT	TA	A	A	T	A	A	T	A	AT	TA	A	A	T	T	T	T	T	T
1910	MAR 23	T	T	T	T	T	T	T	A	T	T	T	T	T	T	T	TA	AT	A	T	TA	A	A	A	A	A	-	A	A	A	A	T	TA	A	A	A	A	A	AT	AT	T	-	T	-	T	T	A	T	T	T	T	AT	T*	T	T*
1911	APR 19	T	T	T	AT	T	T	-	A	T	T	T	AT	T	A	A	AT	T	T	T	T	TA	A	A	A	A	A	AT	A*	A	A	-	AT	A	TA	A	A*	-	T	A	A	T	T	A	T	-	AT	A	A	T	T	-	A	-	T	A	A*
1912	MAY 16	T	T	T	T	T	T	T	T	AT	T	-	T	-	TA	T	T	A	A	T	AT	AT	T	T	AT	A	A	A	-	A	A	A	-	A	A	A*	A	A	A	A	A	A	A	A	-	T*	A	-	A	A	A	-	-	T	T	T
1913	JUN 12	TA	T*	-	T	*	-	T	T	TA	T*	A	A	T	T	-	T*	T	T*	T	T	T	T	AT	AT	A	A	A	A	TA	T	*	-	T	T	-	A	A	A	A	A	A	A	A*	A	AT	T	-	T	T	A	A	-	A	T	T
1914	JUL 9	T	T	T	T	A	A	T	T	-	T	AT	A	T	T	*	A	T	*	-	A	A	AT	*	-	A	A	T	T	A	TA	-	T	T	T	T	T	A	A	-	A*	A	A	A	A*	A	TA	-	A	A	TA	T	T*	T	*	T	T
1915	AUG 5	T	T	A	A	A	A	T	AT	A	A	A	T	T	T	*	T	T	AT	*	T	AT	T	T	A	A	T	T	A	A	A	TA	T	T	T	T	T	A	A	A	A	A	T	A	A	A*	A	AT	A	A	A	A	T	TA	A	A*	A	A
1916	SEP 1	T	TA*	T	T	T	T	A	AT	A	A	A	TA*	A	A	A	*	T	T	T	T	T	T	T	A	A	A	A	A	T	T	T	T	T	T	T	T	A	A	T	A	A	T	*	A	A	A	A	A	TA	A*	A	A
1917	SEP 28	A	A*	TA	A	T	AT	T	T	A	A	A	A	A	T	A	AT	A*	AT	T*	AT	AT	T	T	T	T	T	T*	T	T	T	T	T*	T	T*	AT	T	TA	A	A	T	-	A*	A	A	A	A	A	T	AT	A	AT	T	T
1918	OCT 25	T	T	T	T	A	TA	A	A	A	T	A	T*	T	A	T	A	A	A	A	A	T	A	TA	T	T	T	AT	T	T	T	T	T	T	TA	T	T	T	T	*	A	A	A	A	AT	A	AT	TA	A	T	A	-	A	A
1919	NOV 21	A	*	T	T	T	-	A	A	A	A	AT	T	A	T	A	T*	A	TA	A	A	A	A	A	A	T	TA	T	T	T	T	T	T	T	*	T	T	T	T	TA	TA	A	A	T	T	-	T	A	A	TA	A	A	T	T
1920	DEC 18	T	T	AT	A	A	T	A	T	A	TA	A	T	A	*	A	A	A	*	AT	T	T	T	T	T	T	T	T	*	T	T	T	T	T	T	T	A	T	AT	T	T	A	T	T	T	T	AT	TA	T	T	T	A	T	AT	T
1921	1974 JAN 14	T	A	A	T	-	T	T	A	A	T	A	A	A	A	A	-	A	A	-	AT	-	T	T	T	TA	T	*	T	A	T	T	T	T	T	A*	AT	T	AT	T	TA	A	T	-	T	T	T	T	T	T	T	TA	A
1922	FEB 10	A	-	A	-	A	*	A	A	A	A	A	A	A	A	TA	T	A	A	A	A	T	*	T	T	T	T	T	T	T	A	T	-	T	T	T	T	T	T	T	TA	T	T	T	T	T	T	T	T	T	A	A	A	A
1923	MAR 9	A	A	A	A	A	A	A	A	A	A	A	A	A	A	T	T	TA	TA	A	AT	A	A	A	A	A	T	A	T	TA	T	A	T	T	A	T	A	A	T	T	T	T	T	T	T	TA	T	T	TA	T	TA	A	TA	-	A	TA
1924	APR 5	A	A	A	A	A	-	TA	A	A	A	A	A	A	A	*	A	A	A	A	A	A	A	A	T	T	TA	TA	TA	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	A	TA	A	AT	T	A	A	A	-	-	-
1925	MAY 2	-	-	A	A	A	A*	AT	T	A	AT	AT	T	A	T*	TA	A	A	A	TA	T*	A	A*	AT	AT	T	T	T	T	T	T	T	T	TA	T*	T	T	T	T	T	T	T	TA	-	T	T	TA	T*	T	T	A	-	-	-
1926	MAY 29	T	T	A	A	A	*	-	A	A	A	A	*	A	A	*	-	TA	*	A	A	A	A	T	T	T	T	TA	TA	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	AT	*	-	T
1927	JUN 25	TA	TA	A	A	-	A	-	A	A	T	A	A	A	A	A	A	A	A	-	TA	TA	-	T	T	T	T	T	T	T	T	-	T	T	-	T	T	T	T	T	T	T	T	T	A	AT	AT	T	T	T	T	T	T
1928	JUL 22	T	T	A	A	A	A	AT	A	A	A	A	A	A	A	A	A	A	A	A	-	T	-	T	-	T	-	T	-	T	-	AT	-	AT	-	T	-	TA	-	T	-	T	-	T	-	T	-	T	-
1929	AUG 18	AT	-	A	-	A	-	A	-	A	-	A	-	A	-	AT	-	TA	T	T	T	T	T	T	T	T	T	T	TA	AT	T	T	T	AT	T	T	T	TA	A	AT	-	T	T	T	T	T	T	T	-	A	-
1930	SEP 14	AT	T	T	TA	AT	A*	A	A	A	A	A	A	A	TA	A	AT	A	A	A	AT	T	T	AA	T	TA	T	T	T	T	T	T	T	T	-	T	T	T	AT	T	T	T	T	T	T	TA	T	T	A	A	T	T	T
1931	OCT 11	T	T	TA	T	A	A	A	A	A	A	A	A	A	A	A	A	AT	A	A	A	TA	A	A	A	T	T	AT	-	T	T	AT	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	TA	T	T	T
1932	NOV 7	TA	-	T	-	A	-	A	-	A	A	A	A	A	A	A	A	A	-	A	-	AT	-	TA	A	T	T	T	T	T	T	T	A	T	*	T	A	T	T*	T	AT	T	T	T	T	T	T	T	TA	T	A	T	T	T
1933	DEC 4	T	T	TA	T	T	A	TA	A	A	T	A	T	A	*	AT	T*	A	T	A	*	A	T	A	A	A	A	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	*	A	T	A	A	A	A	AT	TA
1934	DEC 31	T	A	T	T	T	T	A	TA	A	T	A	T	A	-	A	-	TA	T	A	A	AT	-	A	A*	A	*	T	T	T	T	T	T	T	T	T	T	T	T*	T	T*	T	T	T	T	T	T	T	*	A	A	A	A	TA	A	A	A
1935	1975 JAN 27	T	T	T	T	A	T	AT	T	A	A*	A	T-	TA	A	A	T	A	T	A	T	A	A	T	-	T	T	T	T	T	AT	T	T	T	T	T	T*	T	-	TA	A	T	A*	AT	T	A	TA	TA	T	A	A	A	A
1936	FEB 23	TA	A	A	A	A	A*	TA	A	A	AT	A	A	A	A	A	A	A	A	AT	T	A	A	A	A	A	T	T	T	T	T	T	A	T	A*	T	T	T	T	TA	T	A*	T	T	T	T	A	T	*	T	T	T	T	A	A
1937	MAR 22	A	A	A	A	TA	A	T	T	A	A*	A	A	A	A	A	A	AT	A*	T	A	A	A	T	*	TA	T	T	T	T	T	T	*	T	A	T	T	A	A	T	A	T	A	A	A	T	T	T	T	A	A	A	A
1938	APR 18	A	A	A	A	A	A	A	A	A	A	*	A	A*	A	A	-	A	A	A	A	A	A	A	A	A	T	T	A	A	A	A	T	T	-	T	T	T	T	T	T	A	A*	T	T	T	T	-	A	T	A	T	T	TA	T
1939	MAY 15	T	T	A	A	TA	TA	A	A	A	A	T	T	TA	TA	-	*	A	A	A	A	A	A	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	T	-	*	-	*	-	*	*	T	T	T	T	A	A
1940	JUN 11	A	A	A	A	A	A	A	A	A	A	A	*	-	-	-	-	-	-	-	A	A	A	A	TA	A	A	AT	A	A	A	A	A	A	A	T	T	T	T	T	T	A	A	T	A*	A	A	T	T	T	T	T	*	T	T	T
1941	JUL 8	A	A	A	A	A	A	A	A	A	TA	A	A	A	TA*	A	A	TA	TA	A	A	T	T	A	A	A	A*	-	*	A	A	A*	A	T	A	A	T	T	T	T	TA	A	AT	T	T	T	T	T	T	T	AT	AT	A	A	A	A
1942	AUG 4	A	A	A	A	A	T	A	A	T	T	AT	T	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	T	T	T	-	A	T	T	*	T	T	TA	T	T	T	T	T	T	-	AT	AT	T	T	T	A	A	A	A
1943	AUG 31	A	A	A	A	TA	A*	T	T	A	A	A	A	TA	A	T	T*	A	A	A	A	A	A	A	A	A	A	A	*	A	A	A	A	A*	A	A*	A	T	T	T	T	T	T	-	T	TA	T	T	T	T	T	T	A	T	A	A
1944	SEP 27	A	A	T	A	A	A	A	A	T	T	T	A	T	-	A	-	A	-	A	A*	A	A	A	A	A	A	*	AT	A	T	T	A	A	A	A	AT	*	T	A	T	T	T	A	T	T	T	T	T	T	T	T	TA	A	A	-
1945	OCT 24	T	T	T	T	T	T	T	T	T	TA	A	A	A	*	A	A	A	A	A	A	A	A	A*	A	*	A	A	A	A	*	AT	-	AT	-	AT	T	AT	T	T	T	T	T	T	T	T	T	T	A	T	*	T	T	T	T	T	T
1946	NOV 20	A	T	A	*	T	T	TA	T	T	A	A	T*	A	T*	A	A	A	-	A	-	A	-	A	A	A	*	A	*	A	A	A	A	A	A	A	A	TA	A	AT	T	T	T	T	T	T	T	T	T	T	*	T	T	T	T	T	T
1947	DEC 17	T	-	T	T	T	T	T	T	T	T	T	TA*	A	T	A	T	A	*	AT*	TA	A	A	A	A	*	A	A																													

T = towards the sun
A = away from the sun
* = effect doubtful or not discernable
- = missing data

The table shows daily inferences of the polarity of the interplanetary magnetic field. The first half of the day is based principally on magnetograms produced by the magnetometer at the Vostok Antarctic Station of the USSR. The magnetometer of the U.S. Air Weather Service operated by the Air Force Cambridge Research Laboratories at the Thule Geopole Station is used for the second half of the day.

NOVEMBER 1975 DATA

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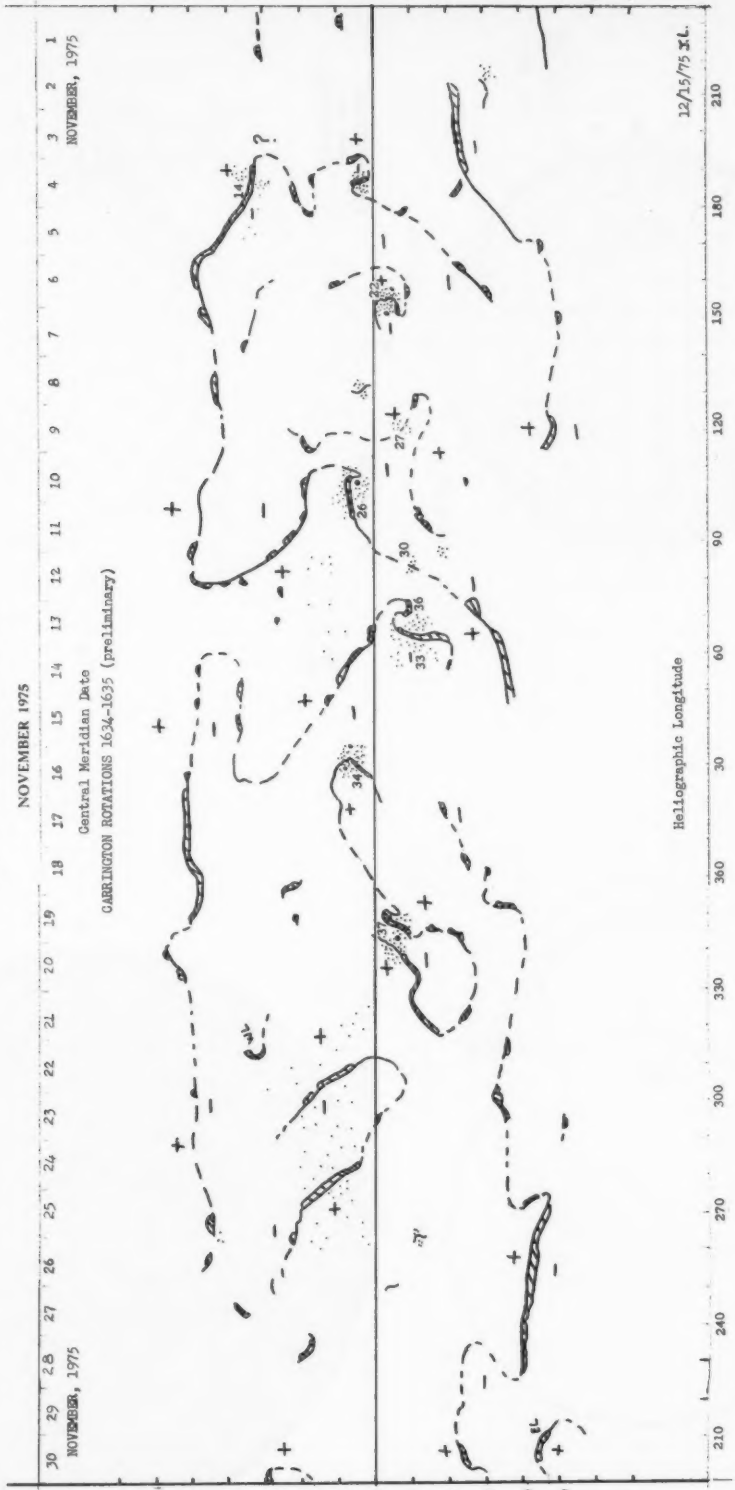
Hα SYNOPTIC CHART



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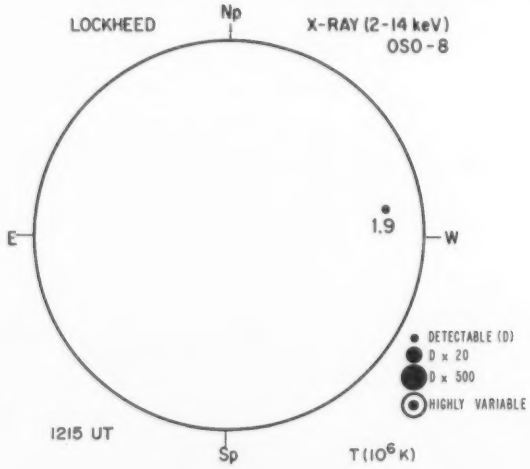
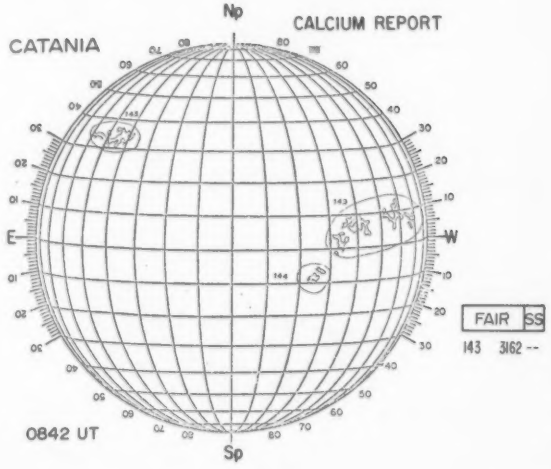
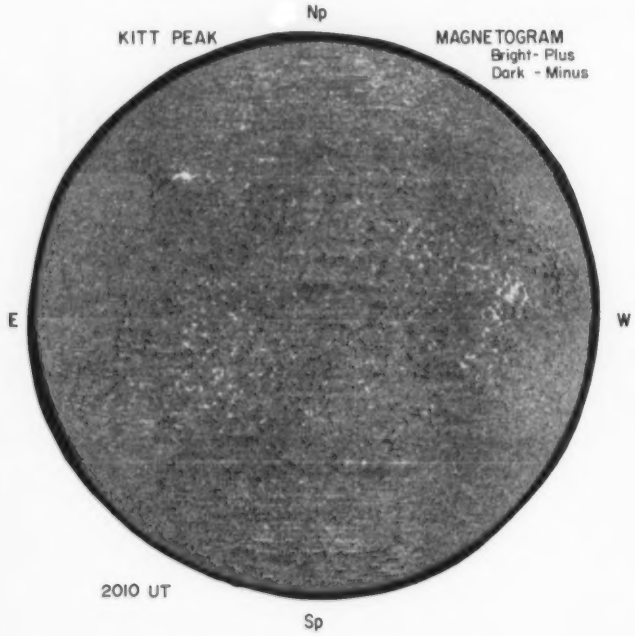
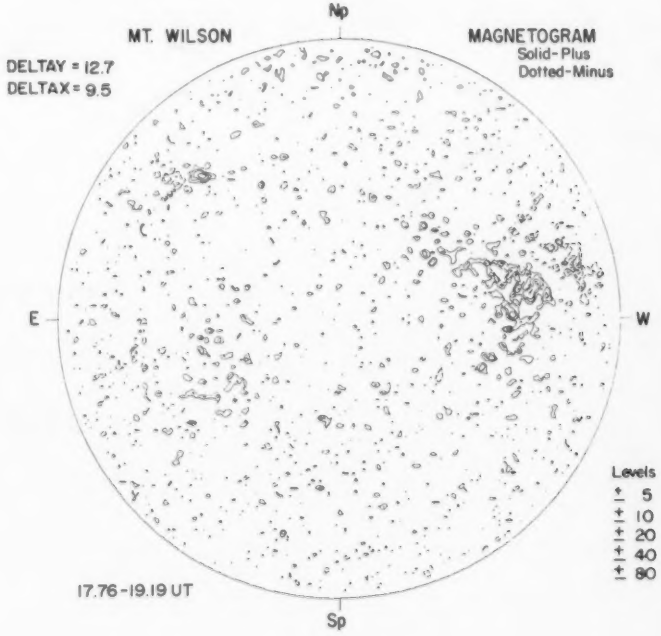
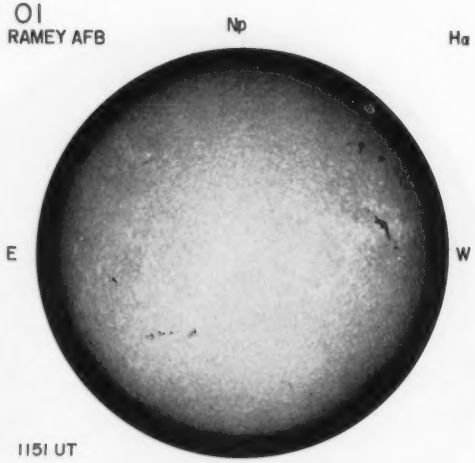






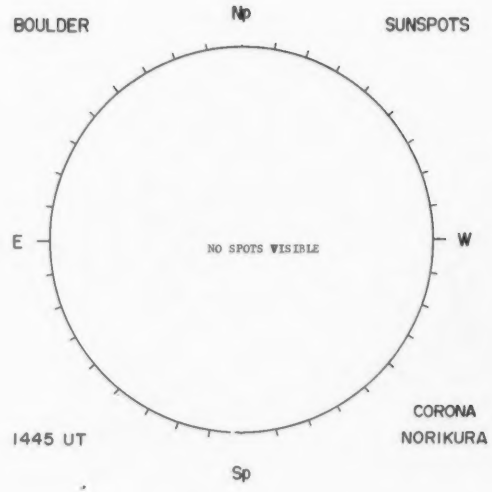


01
RAMEY AFB



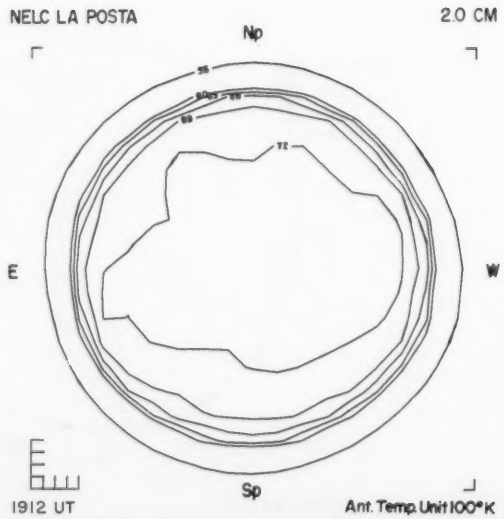
1151 UT

BOULDER



1445 UT

NELC LA POSTA



1912 UT

Ant. Temp. Unit 100°K

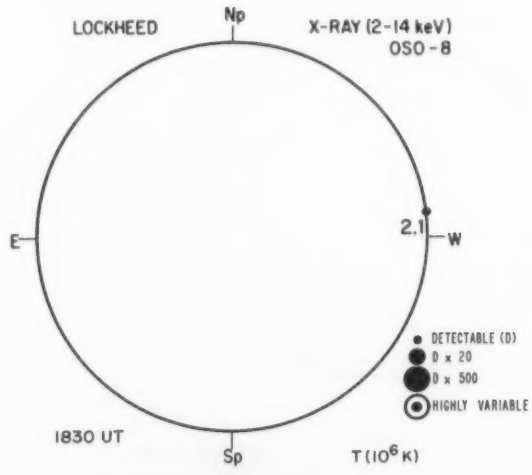
NELC LA POSTA

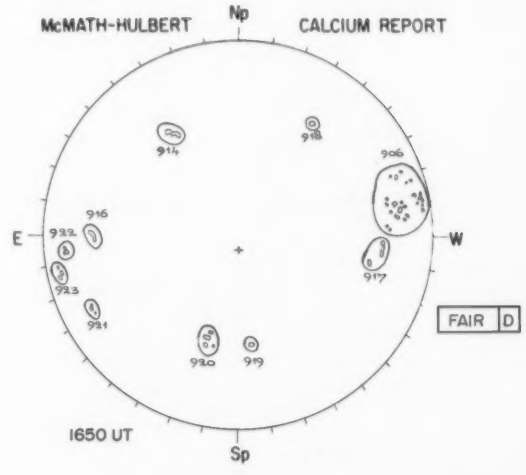
2009 UT

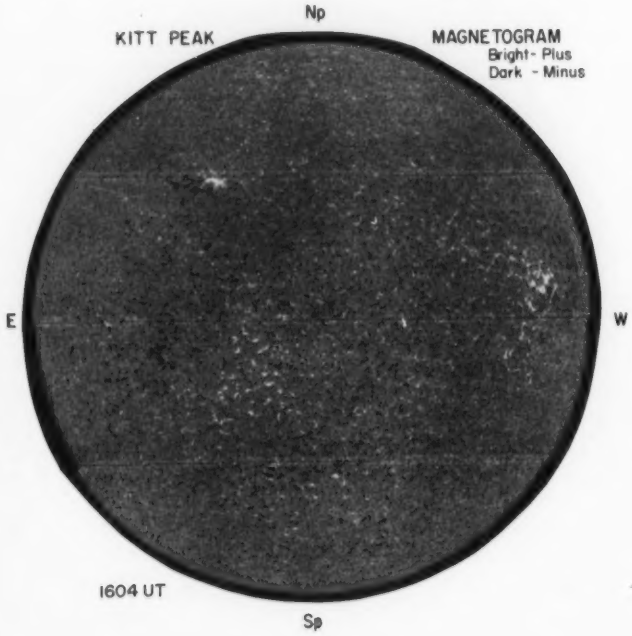
Ant. Temp. Unit 100°K

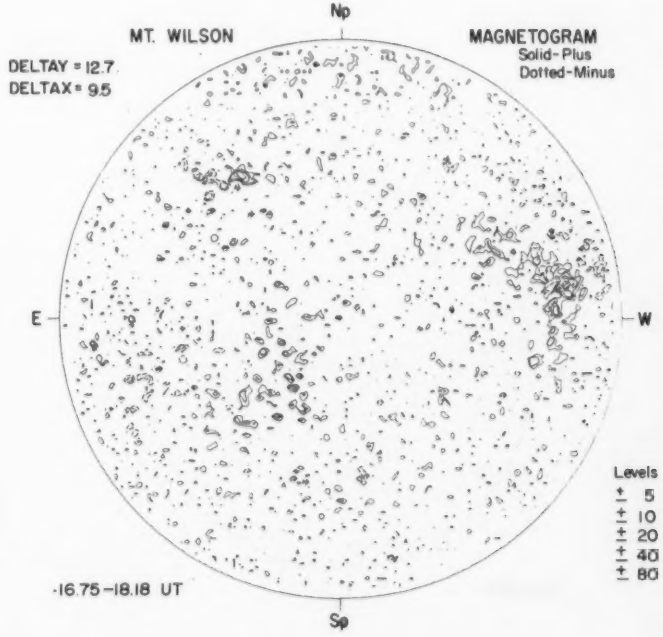
27 Nov 75

NOVEMBER 2, 1975 (P =24.48, B_0 =4.30, L_0 =219.33)

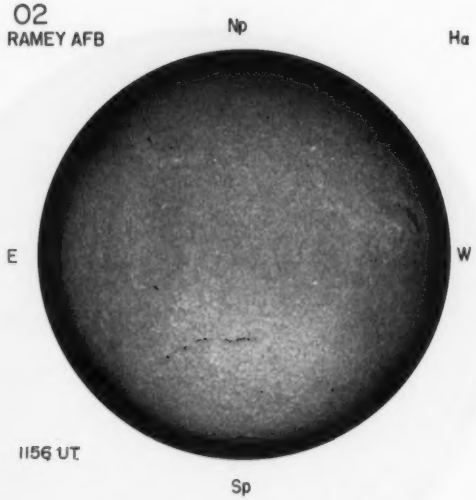






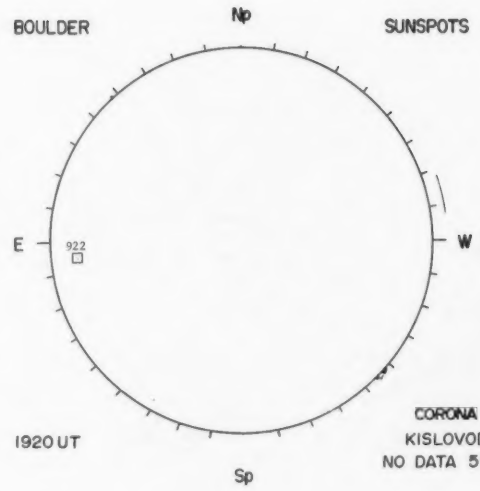


02
RAMEY AFB



1156 UT

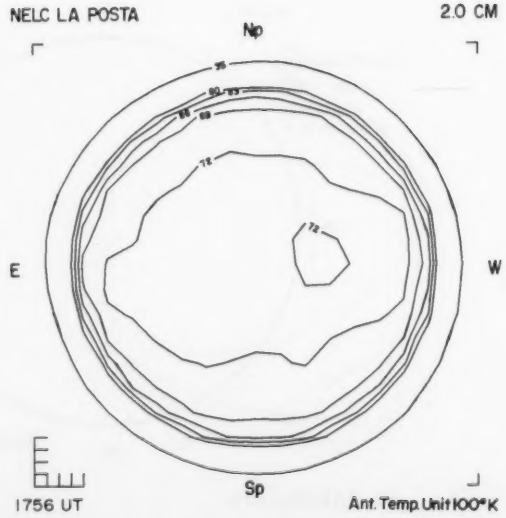
BOULDER



1920 UT

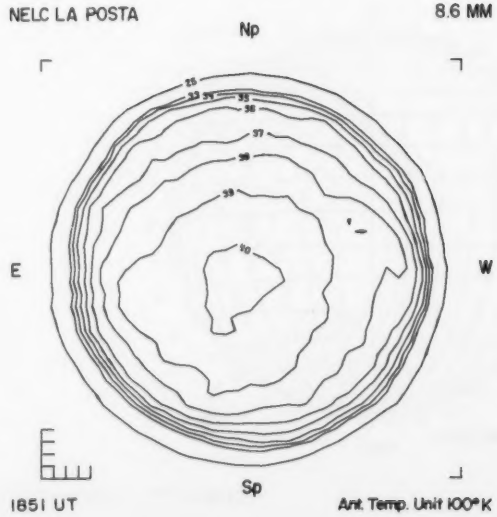
CORONA
KISLOVODSK
NO DATA 5°; 140°

NELC LA POSTA



1756 UT
Ant. Temp. Unit 100°K

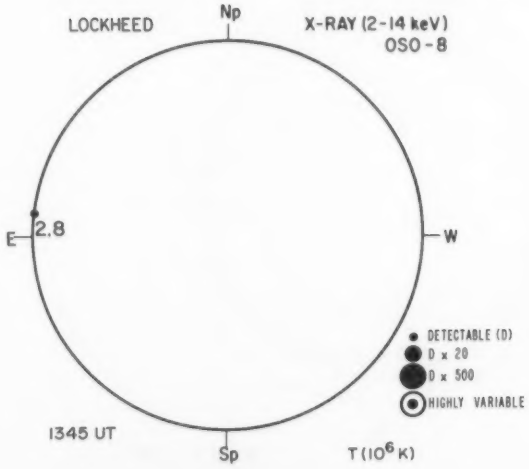
NELC LA POSTA

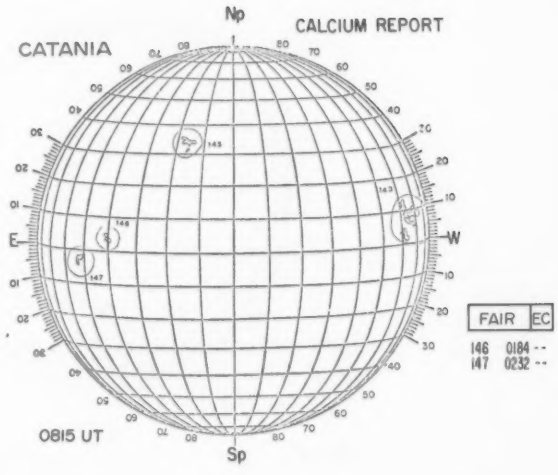


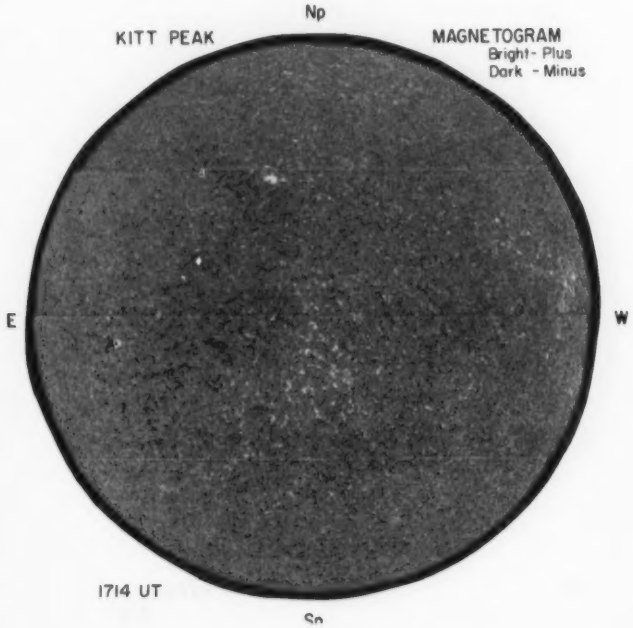
1851 UT
Ant. Temp. Unit 100°K

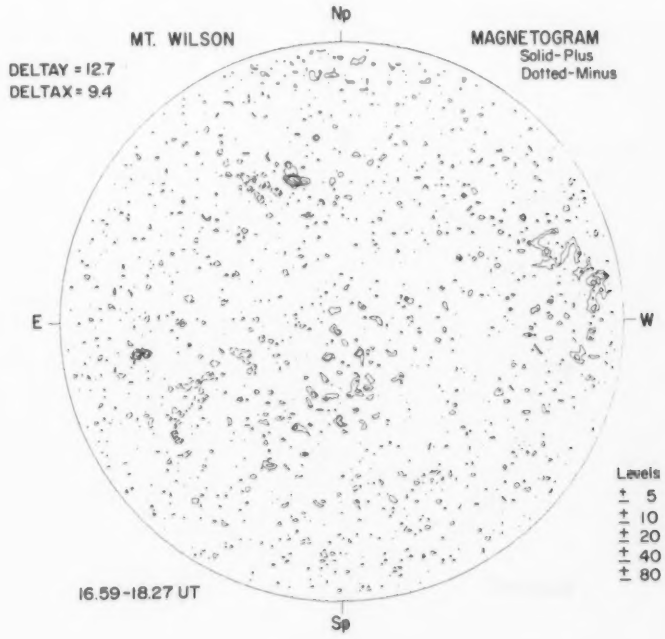
29
Nov 75

NOVEMBER 3, 1975 (P =24.30, B_o =4.20, L_o =206.14)

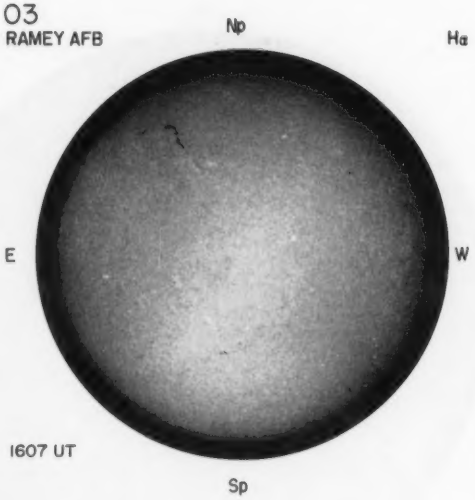






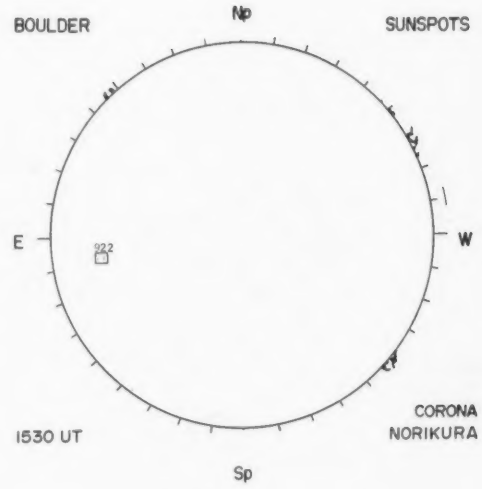


03
RAMEY AFB



1607 UT

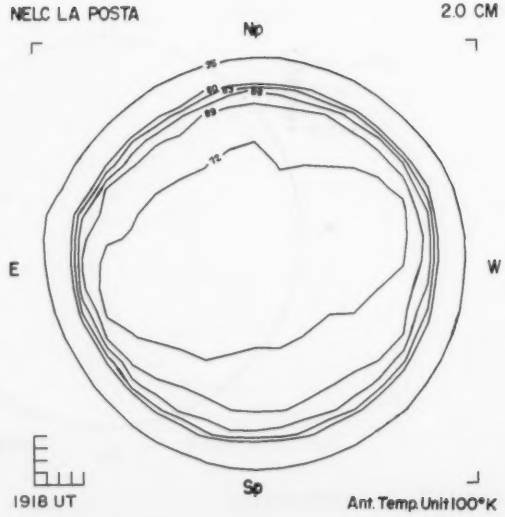
BOULDER



1530 UT

CORONA
NORIKURA

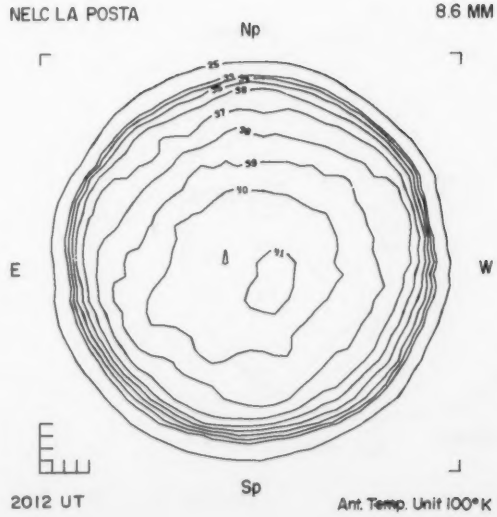
NELC LA POSTA



1918 UT

Ant. Temp. Unit 100°K

NELC LA POSTA



2012 UT

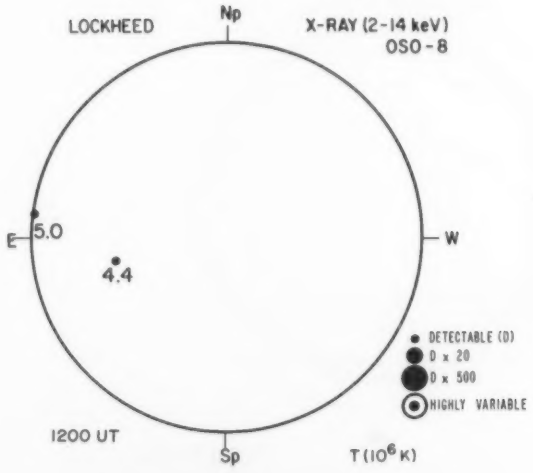
Ant. Temp. Unit 100°K

31
Nov 75

NOVEMBER 4, 1975 (P = 24.12, B_0 = 4.10, L_0 = 192.96)

LOCKHEED

X-RAY (2-14 keV)
OSO-8

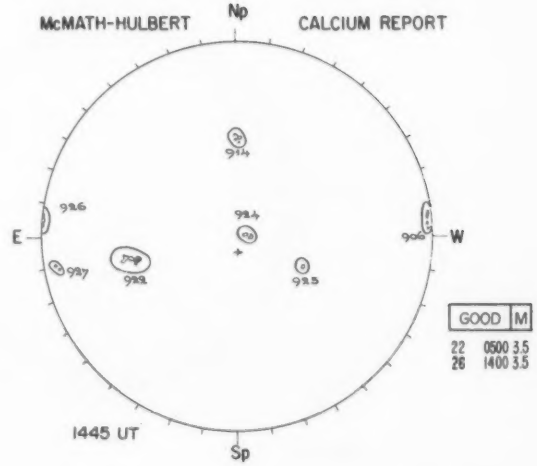


1200 UT

T(10^6 K)

McMATH-HULBERT

CALCIUM REPORT

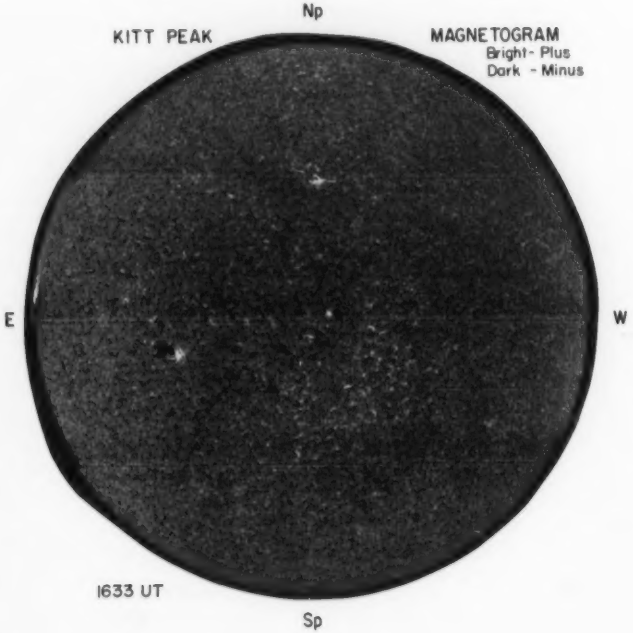


GOOD	M
22	0500 3.5
26	1400 3.5

1445 UT

KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

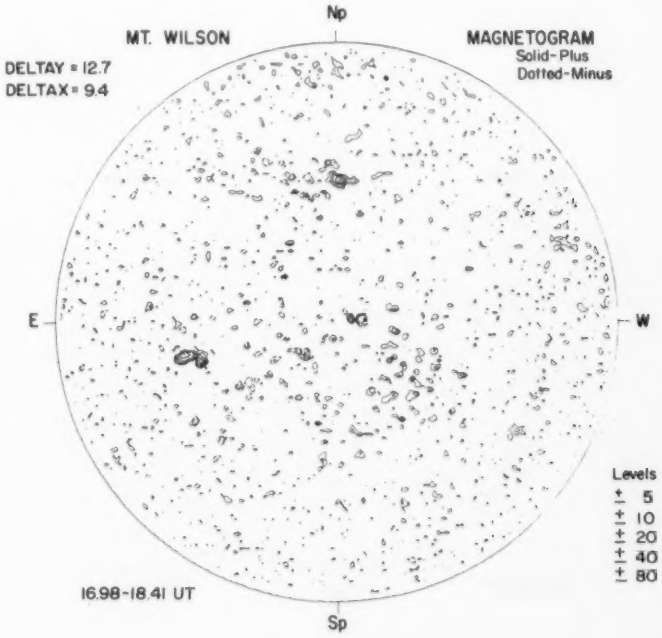


1633 UT

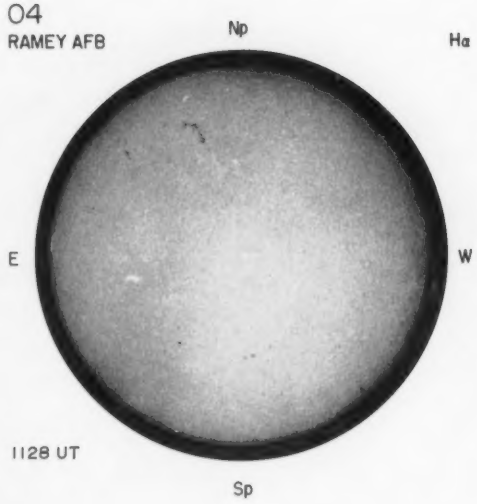
MT. WILSON

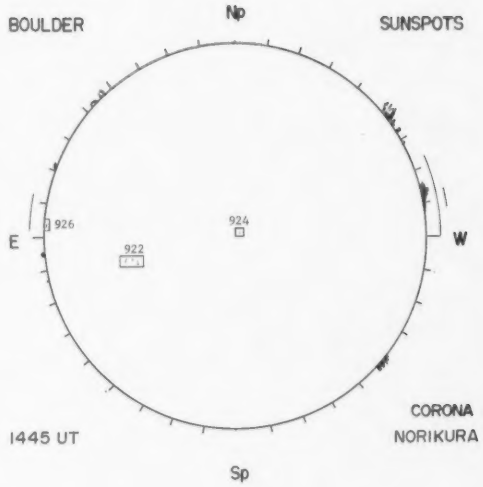
MAGNETOGRAM
Solid - Plus
Dotted - Minus

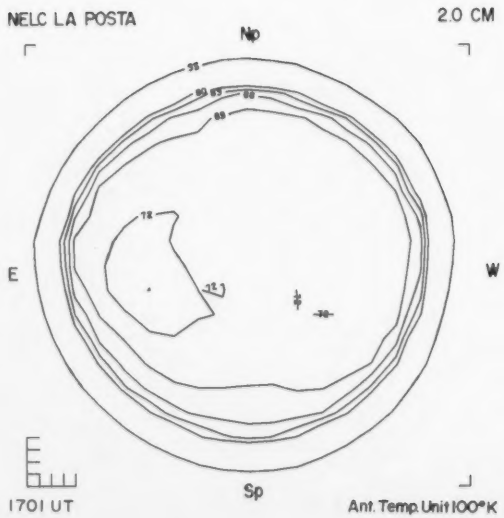
DELTAY = 12.7
DELTAX = 9.4

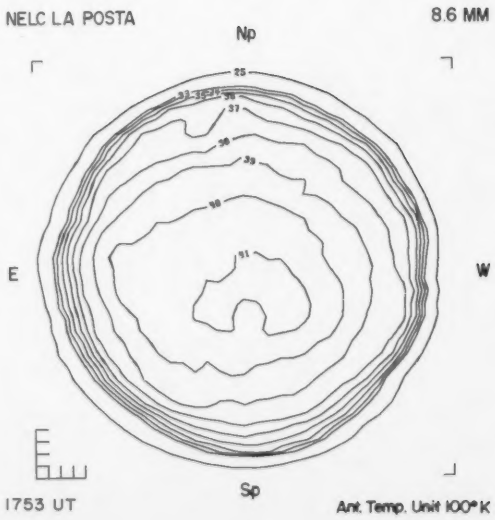


16.98-18.41 UT


04
RAMEY AFB
Np
Hα
E
W
1128 UT
Sp

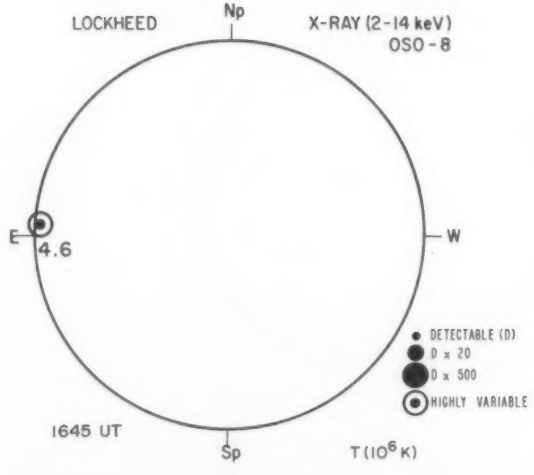

BOULDER
Np
SUNSPOTS
926
924
922
E
W
CORONA
NORIKURA
1445 UT
Sp


NELC LA POSTA
2.0 CM
Np
E
W
1701 UT
Sp
Ant. Temp. Unit 100°K

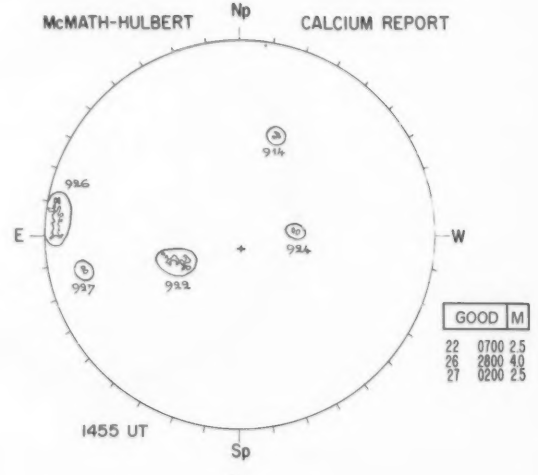

NELC LA POSTA
8.6 MM
Np
E
W
1753 UT
Sp
Ant. Temp. Unit 100°K

NOVEMBER 5, 1975 (P = 23.93, B_o = 3.99, L_o = 179.77)

LOCKHEED X-RAY (2-14 keV) OSO-8

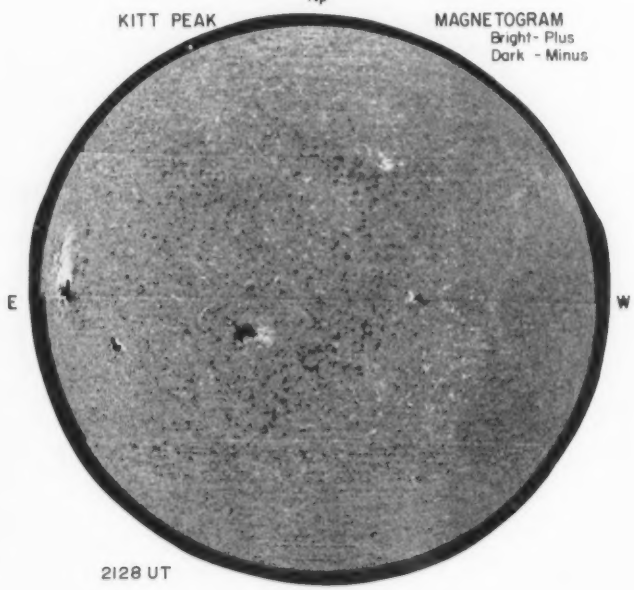


McMATH-HULBERT CALCIUM REPORT



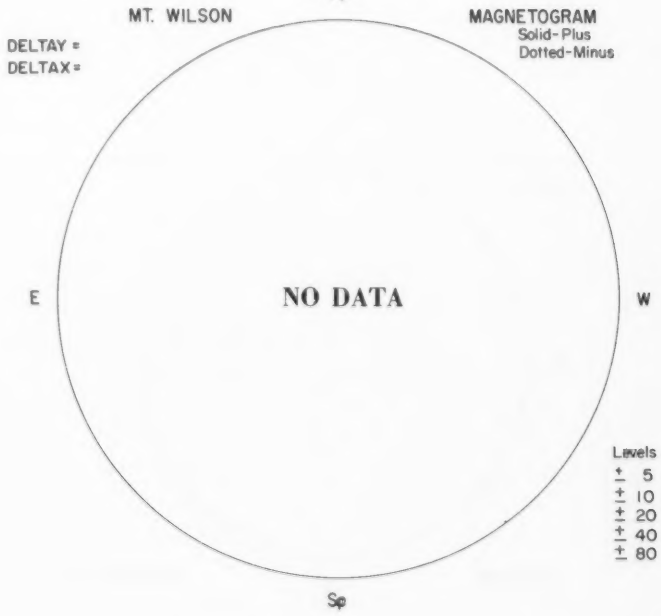
GOOD	M
22	0700 2.5
26	2800 4.0
27	0200 2.5

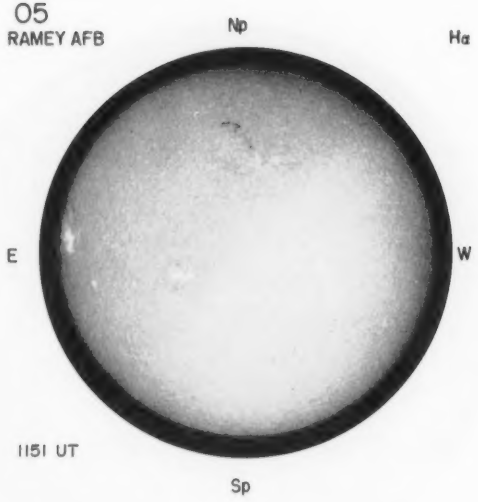
KITT PEAK MAGNETOGRAM
Bright - Plus
Dark - Minus

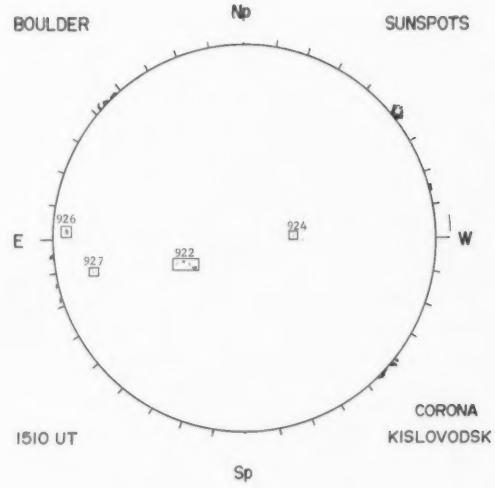


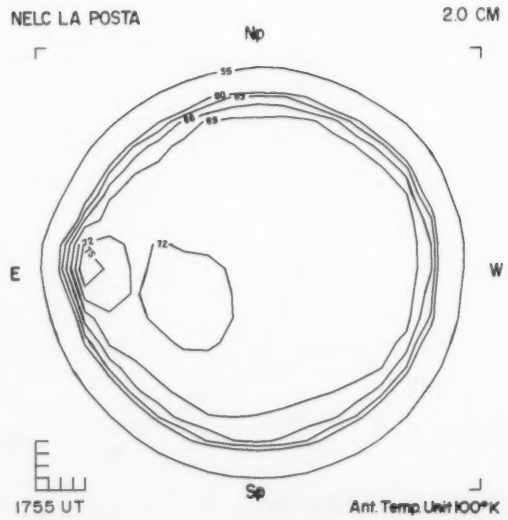
MT. WILSON MAGNETOGRAM
Solid - Plus
Dotted - Minus

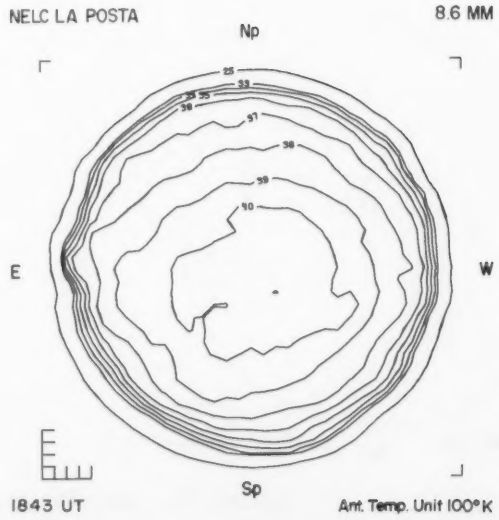
DELTAY =
DELTAX =



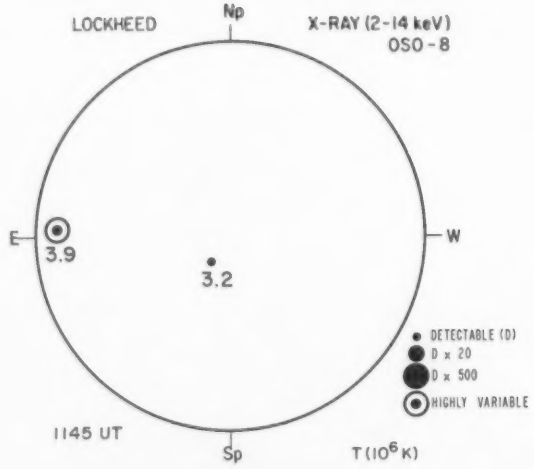

05
RAMEY AFB
Np
Hα
E
W
1151 UT
Sp

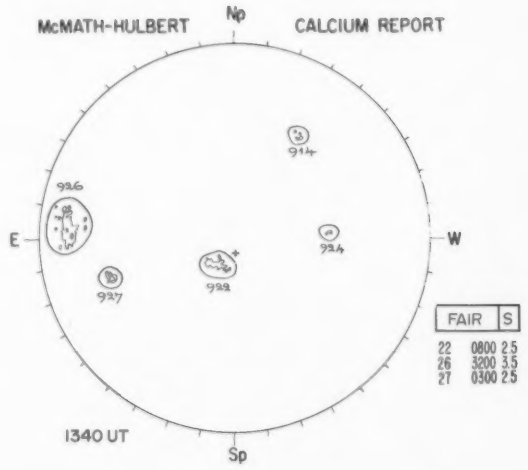

BOULDER
Np
SUNSPOTS
926
924
927
922
E
W
CORONA
KISLOVODSK
1510 UT
Sp

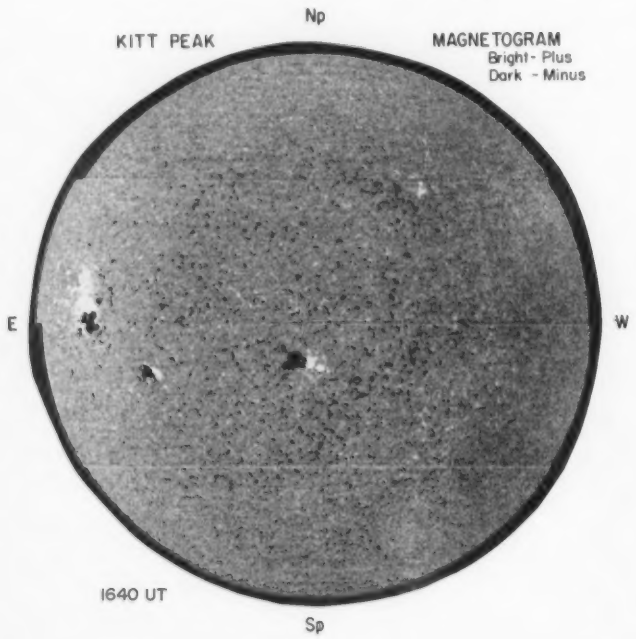

NELC LA POSTA
2.0 CM
Np
E
W
Sp
1755 UT
Ant. Temp. Unit 100°K

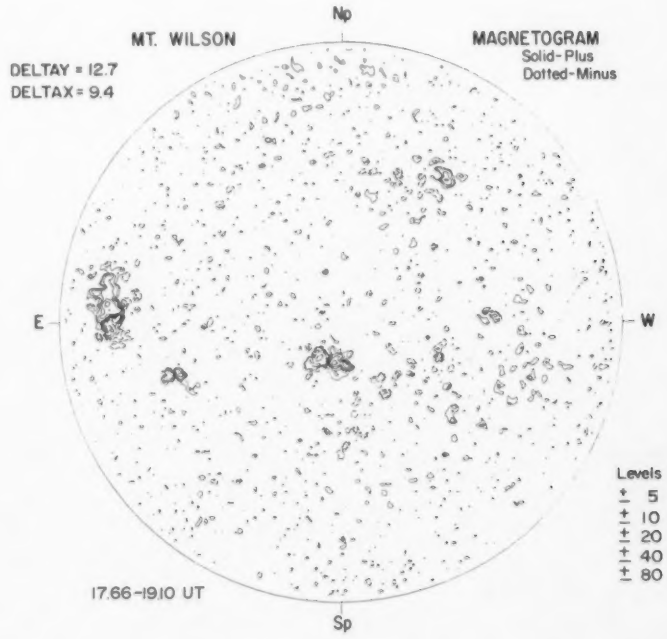

NELC LA POSTA
8.6 MM
Np
E
W
Sp
1843 UT
Ant. Temp. Unit 100°K

NOVEMBER 6, 1975 (P=23.73, B_0=3.89, L_0=166.59)

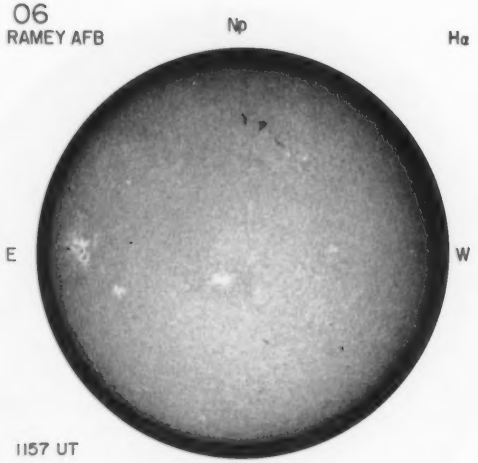






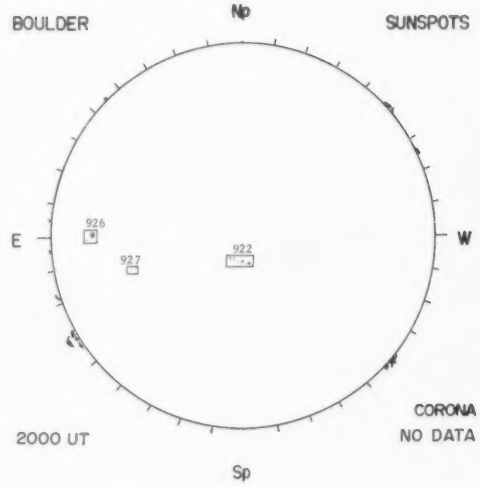


06
RAMEY AFB



1157 UT

BOULDER

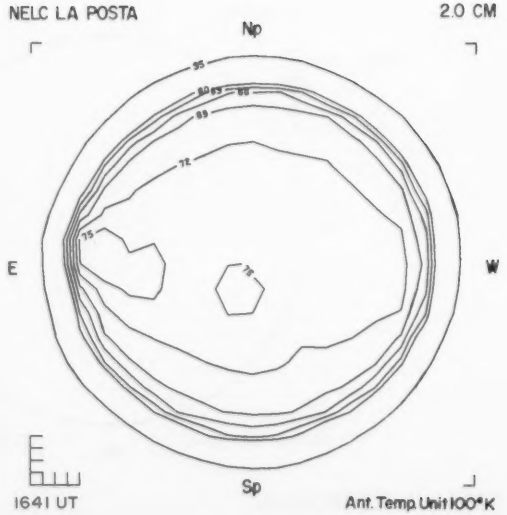


2000 UT

CORONA
NO DATA

NELC LA POSTA

2.0 CM

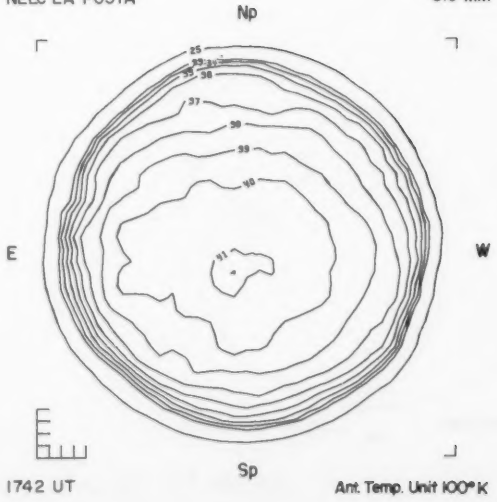


1641 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

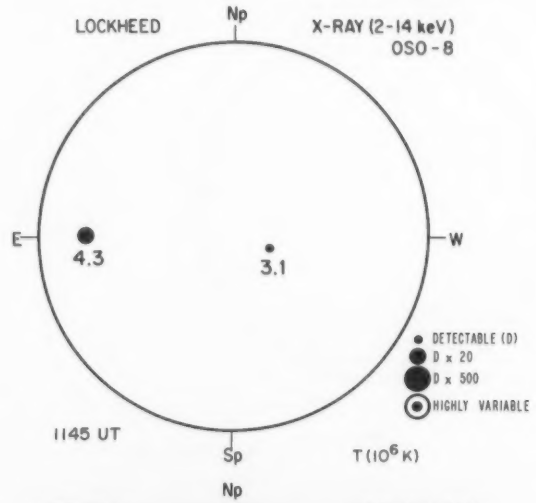
8.6 MM

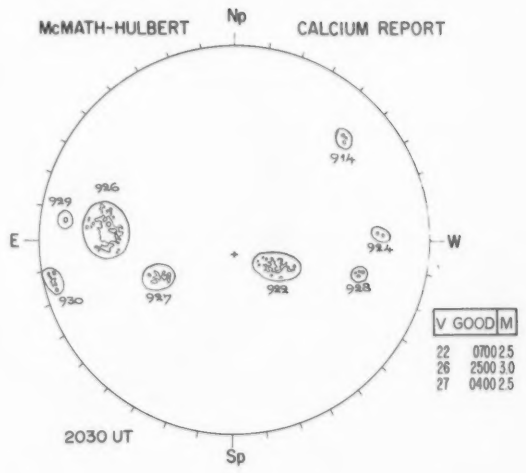


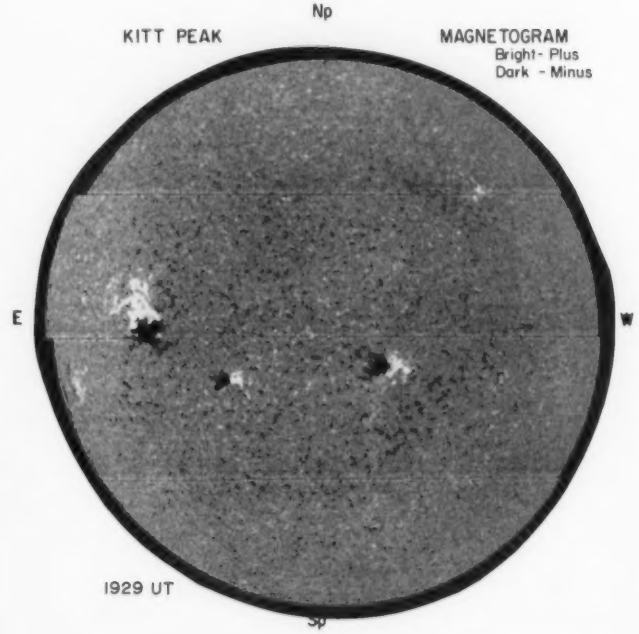
1742 UT

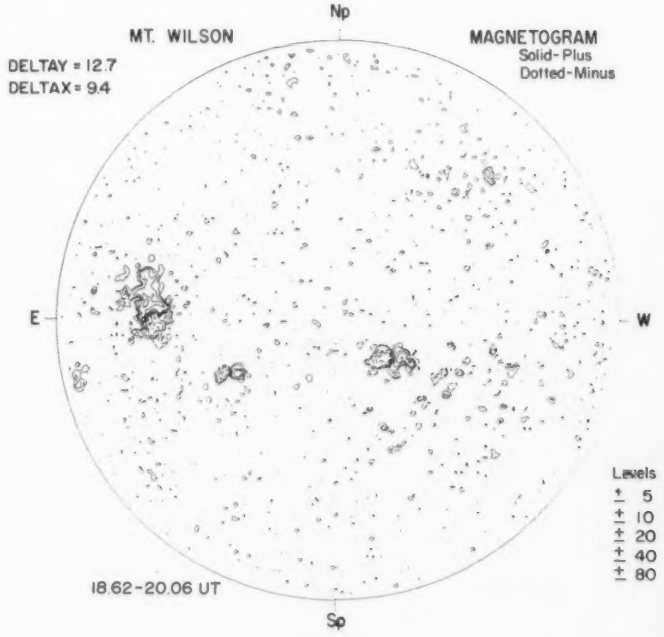
Ant. Temp. Unit 100°K

NOVEMBER 7, 1975 (P = 23.53, B_0 = 3.78, L_0 = 153.40)

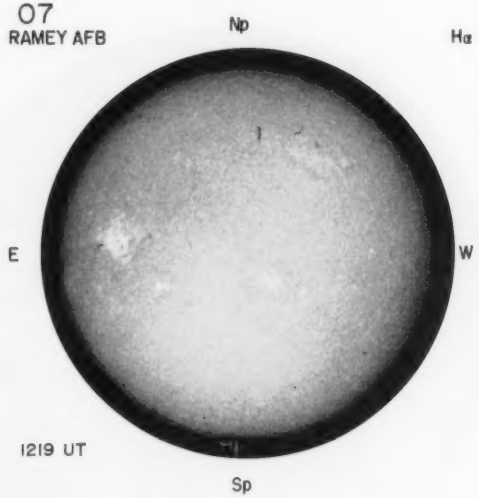






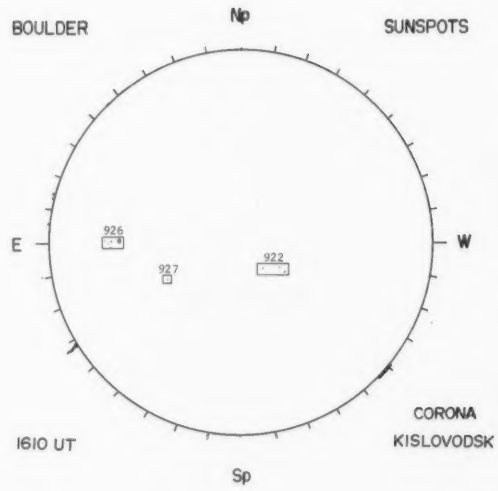


07
RAMEY AFB



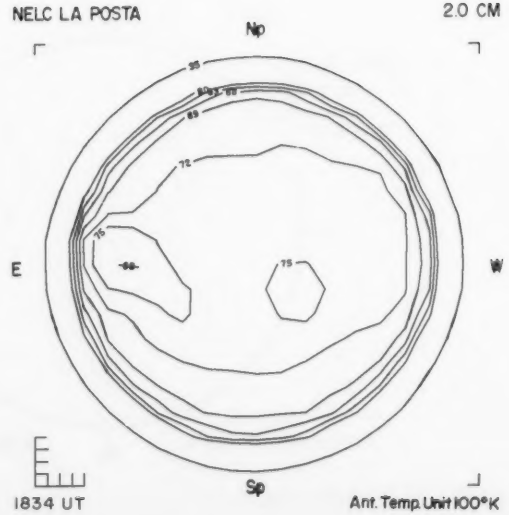
1219 UT

BOULDER



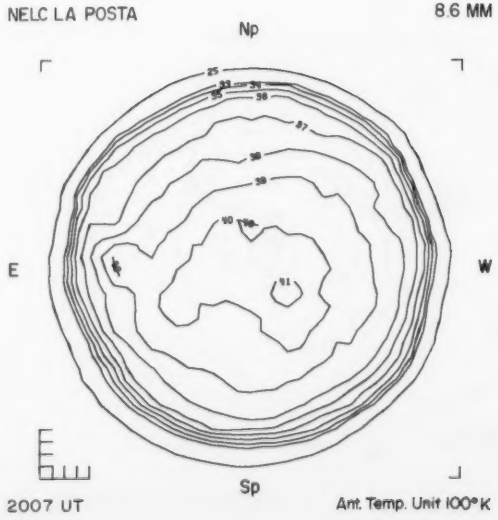
CORONA
KISLOVODSK
1610 UT

NELC LA POSTA



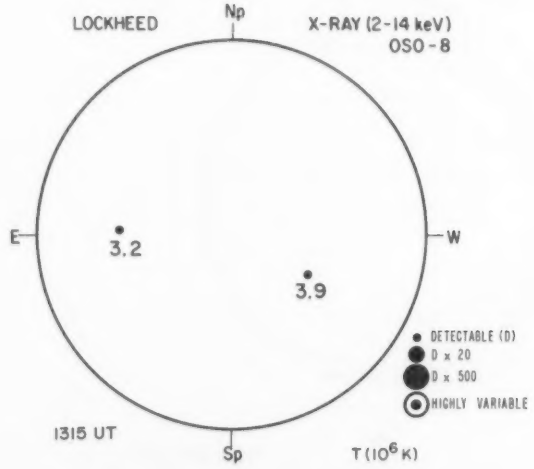
1834 UT

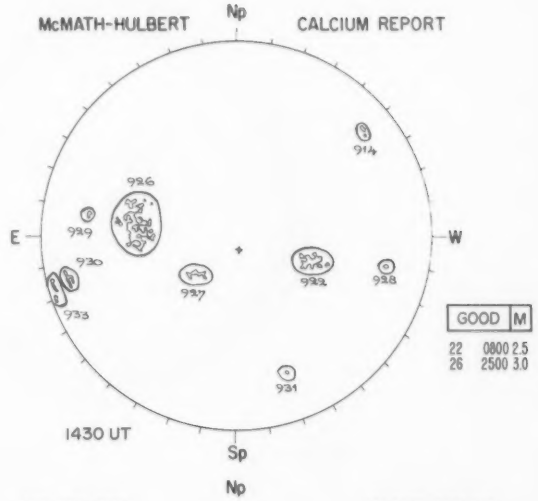
NELC LA POSTA

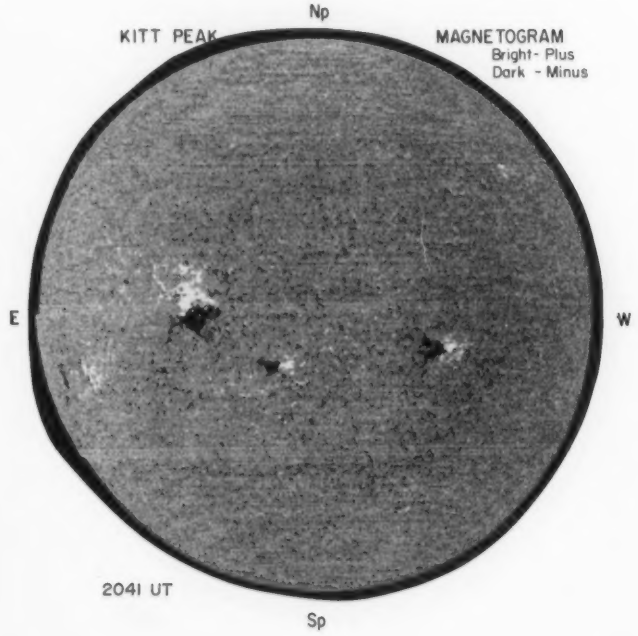


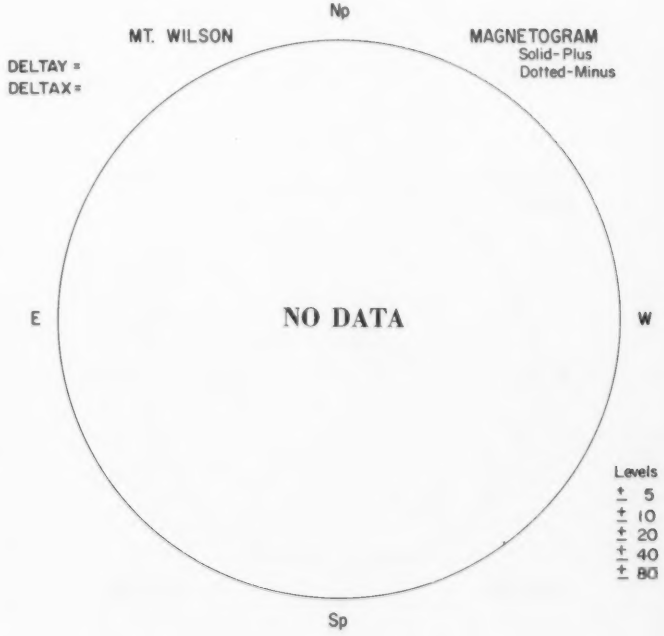
2007 UT

NOVEMBER 8, 1975 (P = 23.31, B_0 = 3.67 L_0 = 140.22)

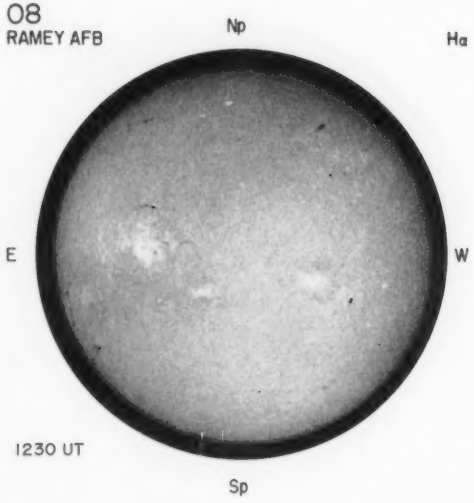




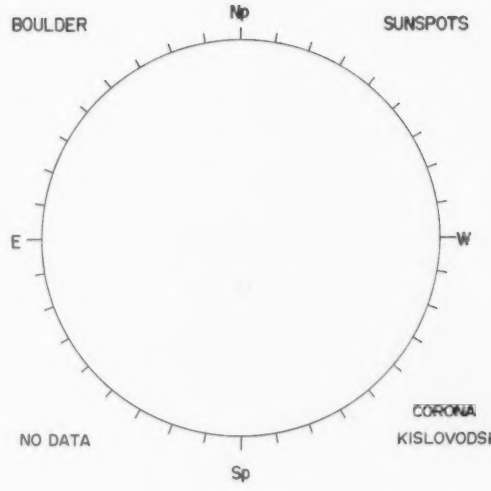




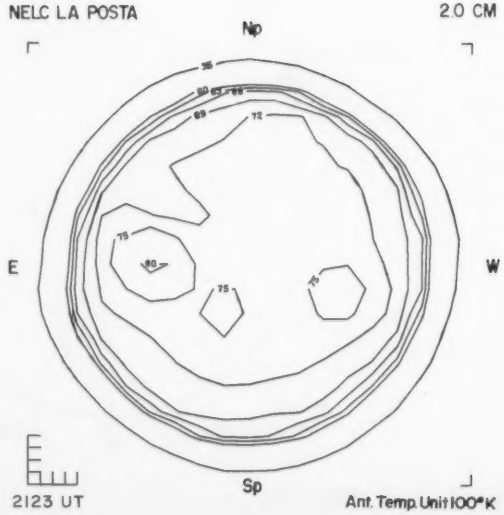
08
RAMEY AFB



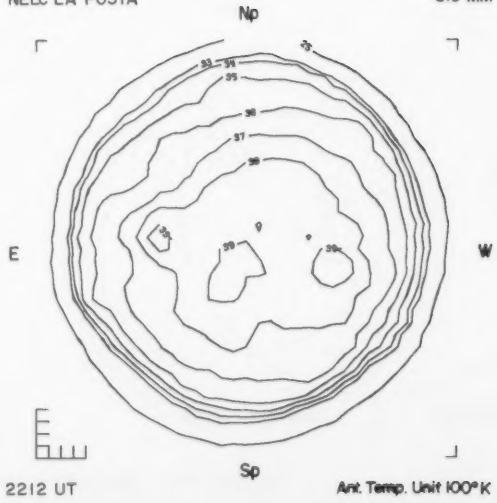
BOULDER



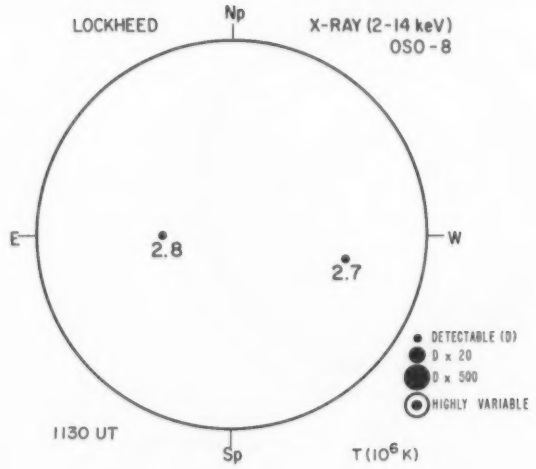
NELC LA POSTA

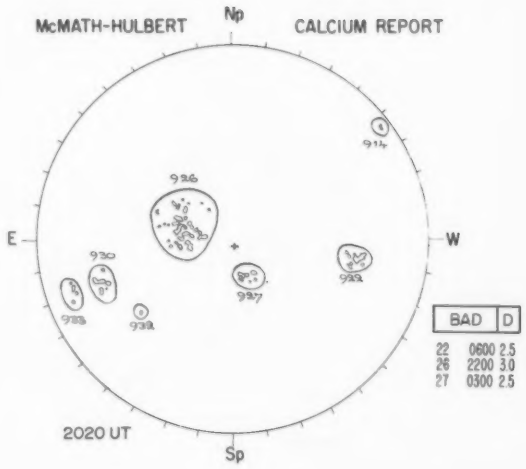


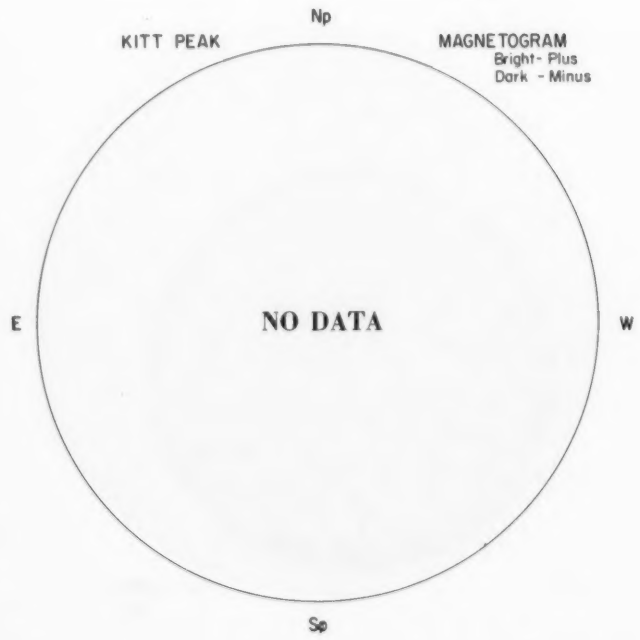
NELC LA POSTA

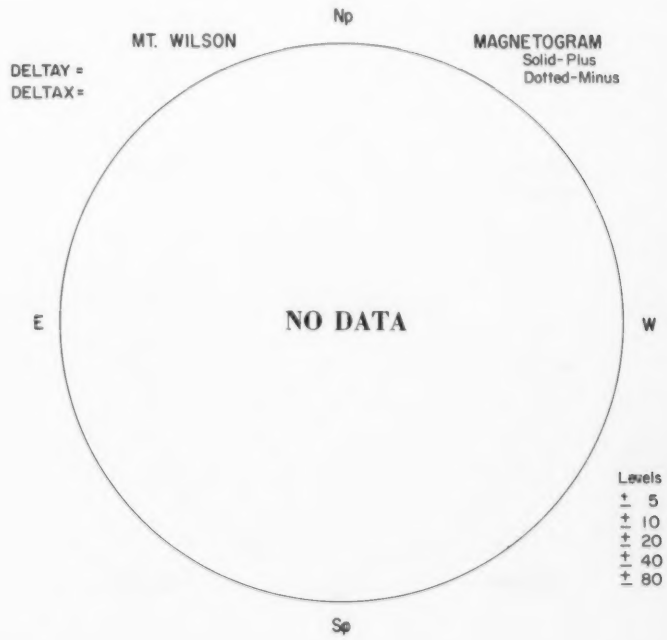


NOVEMBER 9, 1975 (P = 23.09, B_o = 3.56, L_o = 127.03)

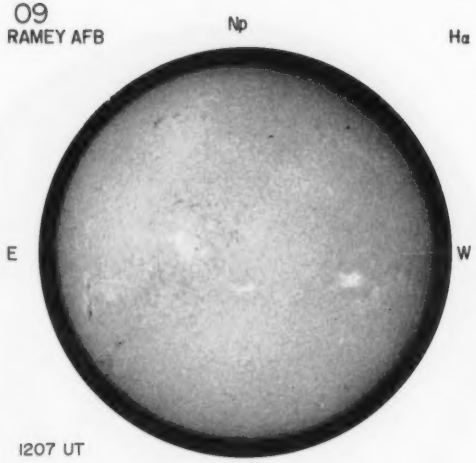






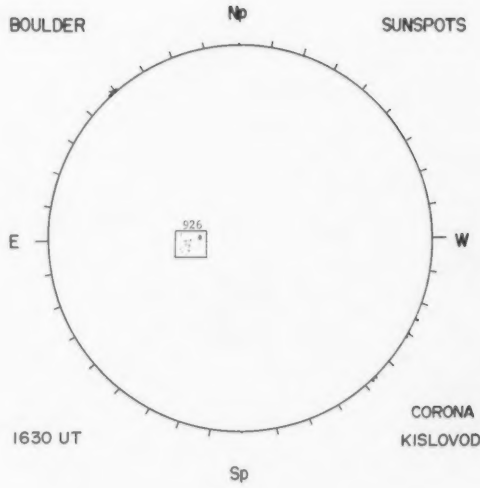


09
RAMEY AFB



1207 UT

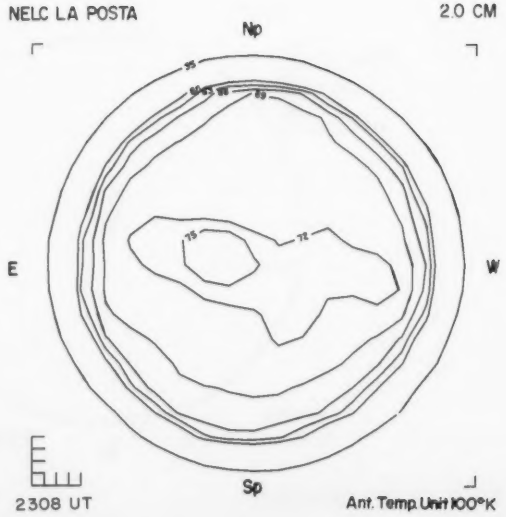
BOULDER



1630 UT

CORONA
KISLOVODSK

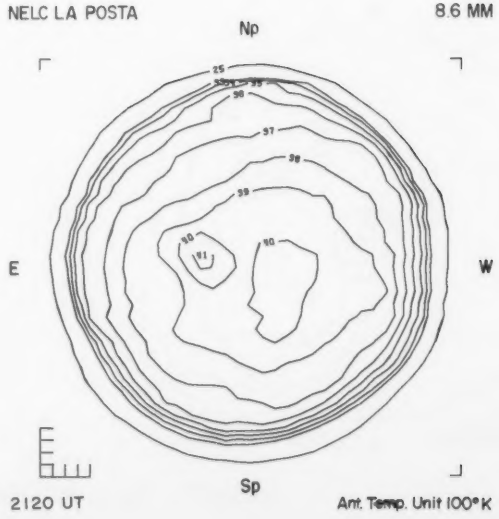
NELC LA POSTA



2308 UT

Ant. Temp. Unit 100°K

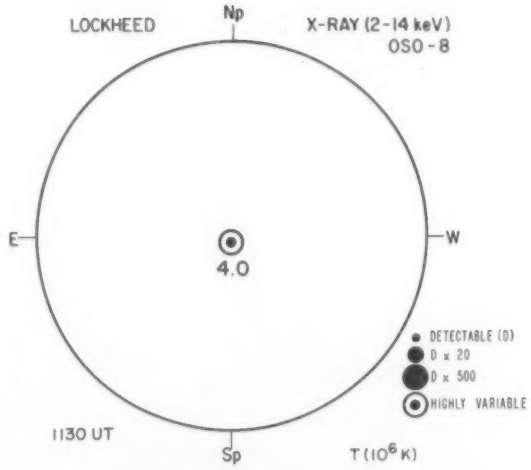
NELC LA POSTA

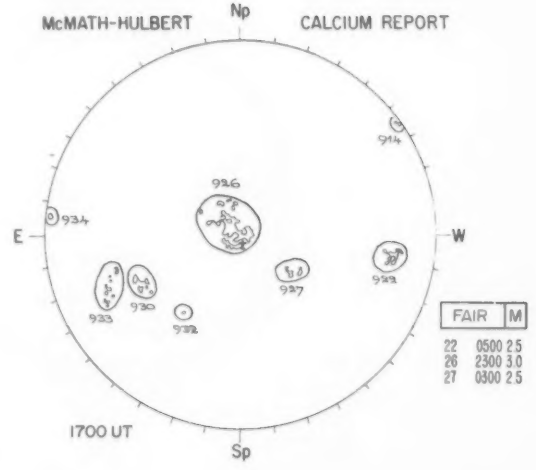


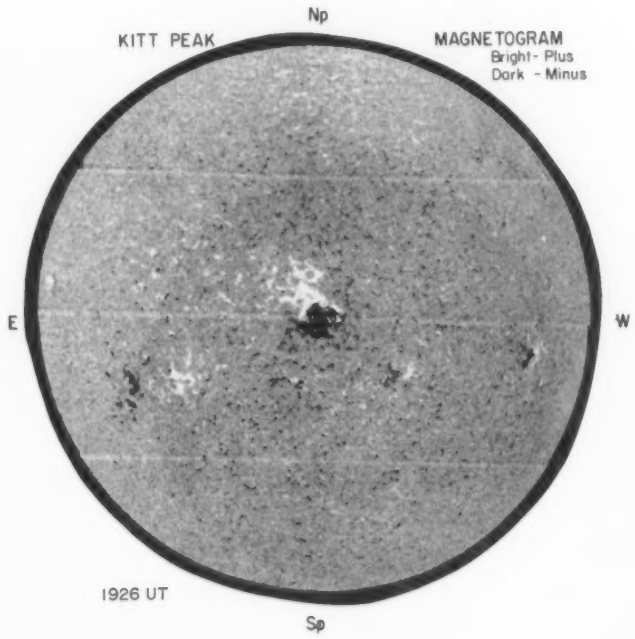
2120 UT

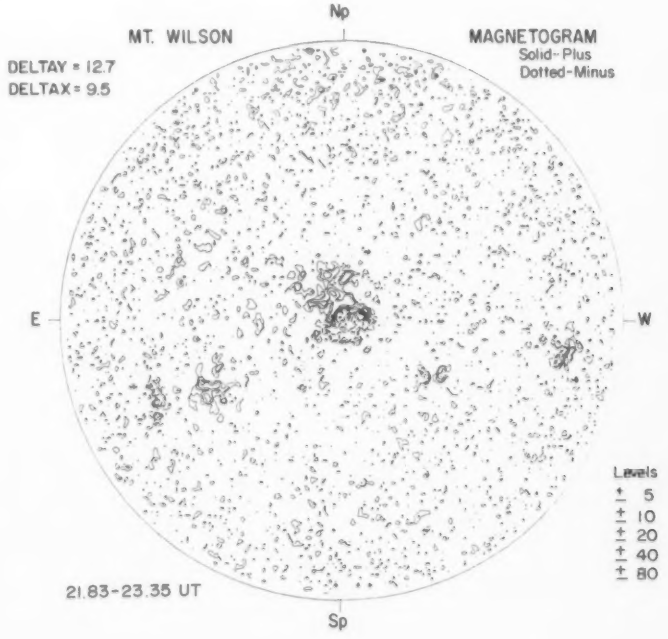
Ant. Temp. Unit 100°K

NOVEMBER 10, 1975 (P = 22.86, B_0 = 3.45, L_0 = 113.85)







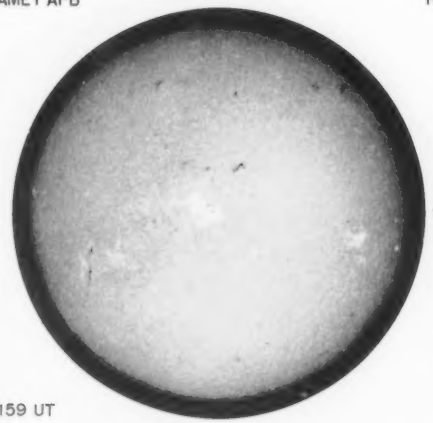


10

RAMEY AFB

Np

Hα



E

W

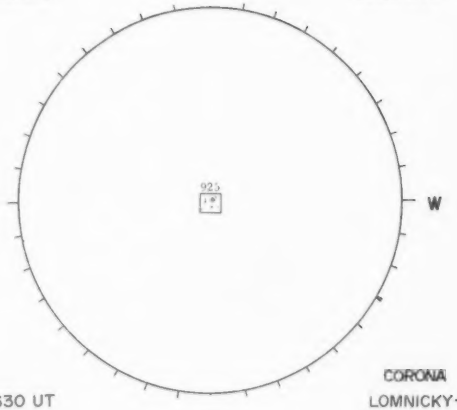
1159 UT

Sp

BOULDER

Np

SUNSPOTS



E

W

CORONA

1630 UT

LOMNICKY-STIT

Sp

NELC LA POSTA

Np

2.0 CM

NO DATA

E

EQUIPMENT

W

---- UT

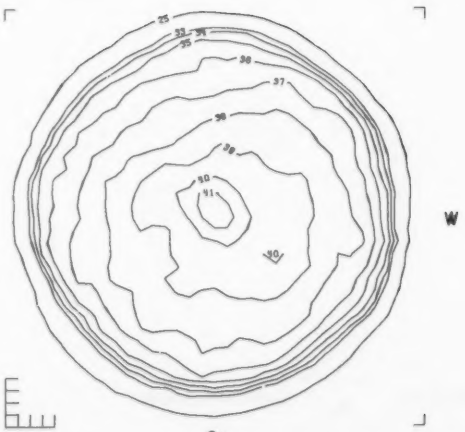
Sp

Ant. Temp. Unit 100°K

NELC LA POSTA

Np

8.6 MM



E

W

2144 UT

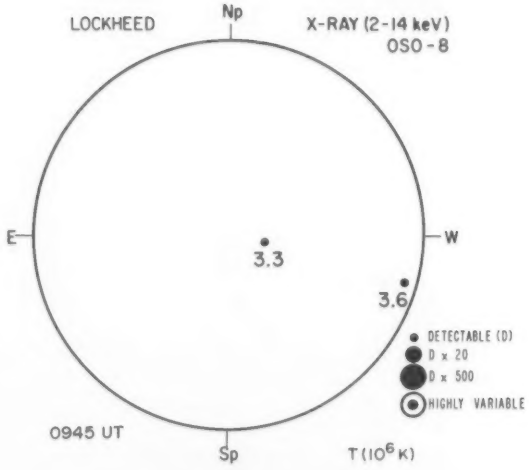
Sp

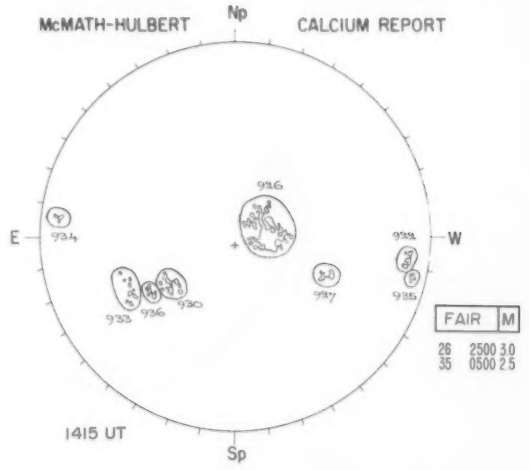
Ant. Temp. Unit 100°K

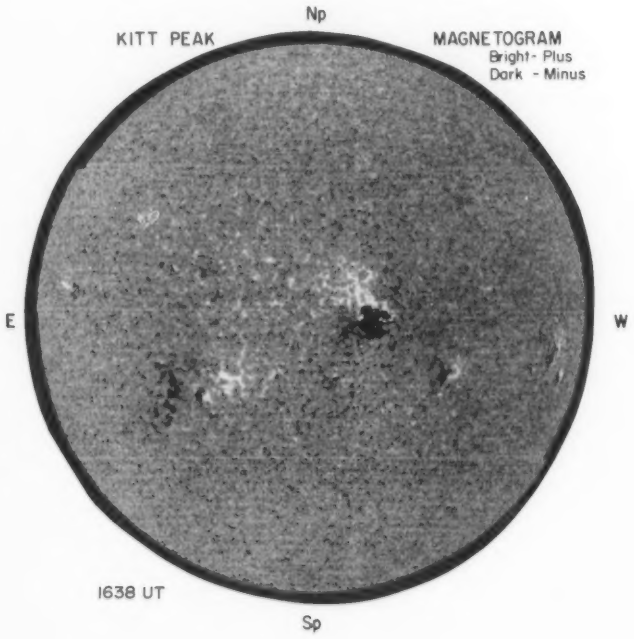
45

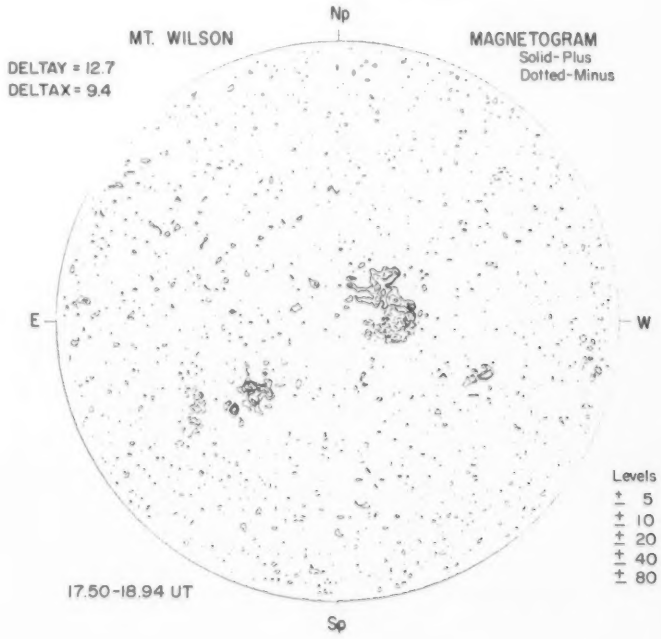
Nov 75

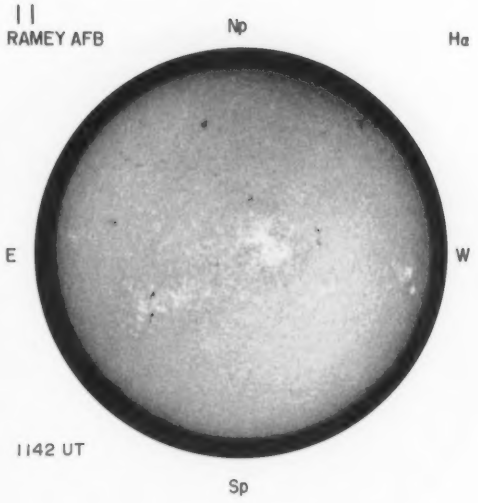
NOVEMBER 11, 1975 (P = 22.63, B_o = 3.34, L_o = 100.67)

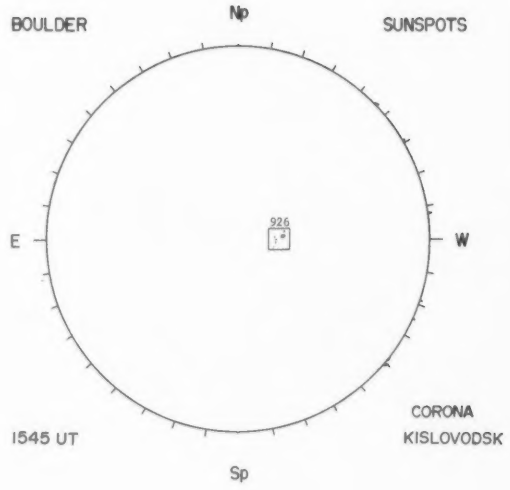


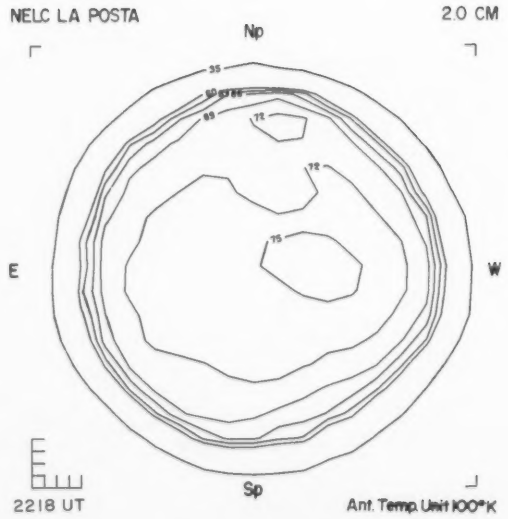


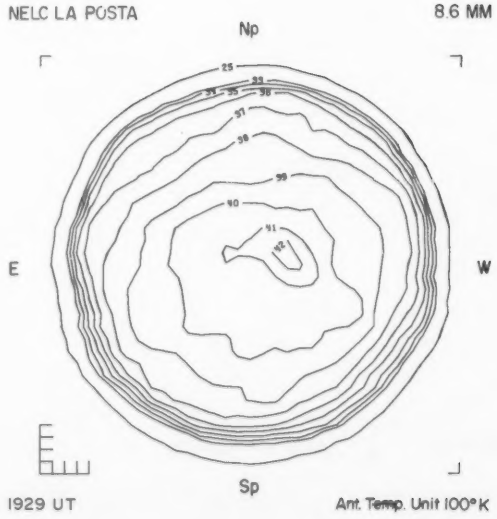




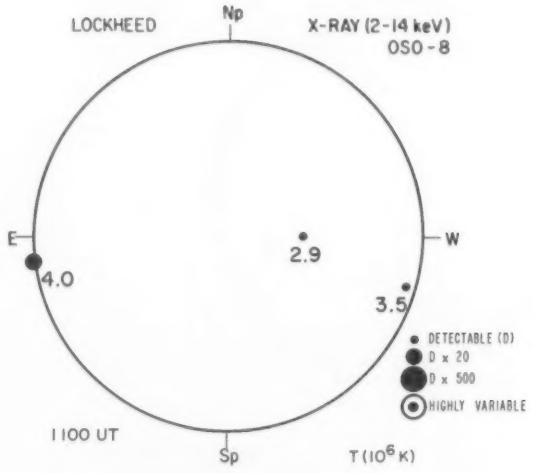

RAMEY AFB
Np
Hα
E
W
1142 UT
Sp

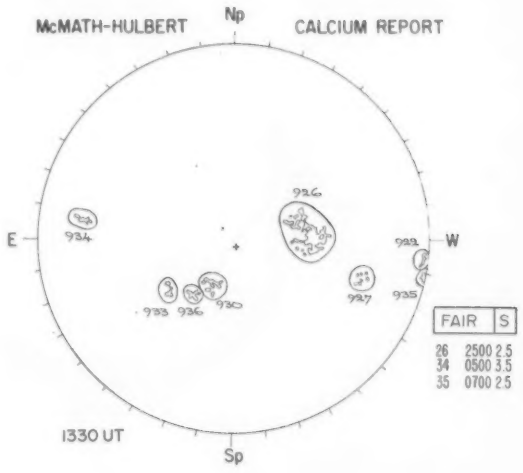

BOULDER
Np
SUNSPOTS
926
E
W
CORONA
KISLOVODSK
1545 UT
Sp

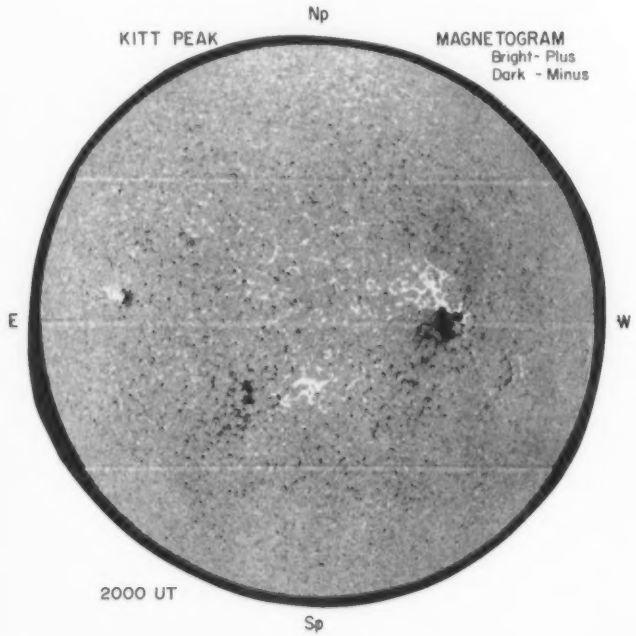

NELC LA POSTA
2.0 CM
Np
E
W
Sp
2218 UT
Ant. Temp. Unit 100°K

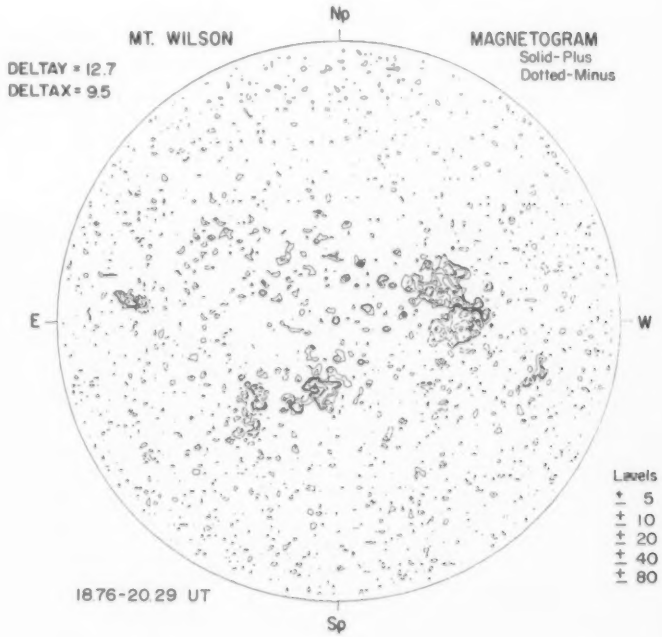

NELC LA POSTA
8.6 MM
Np
E
W
Sp
1929 UT
Ant. Temp. Unit 100°K

NOVEMBER 12, 1975 (P = 22.38, B_o = 3.22, L_o = 87.48)



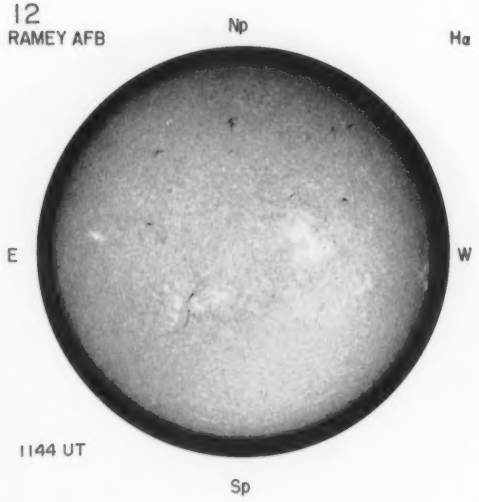






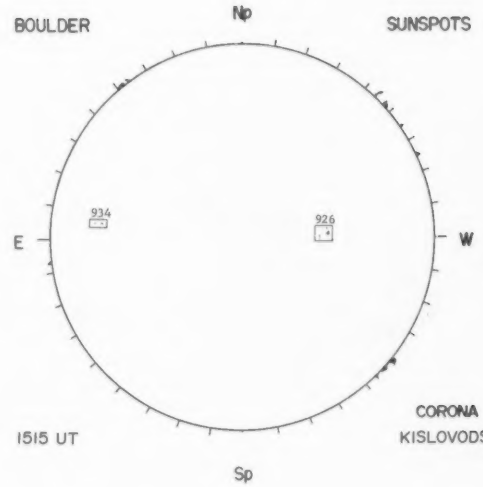
12

RAMEY AFB



1144 UT

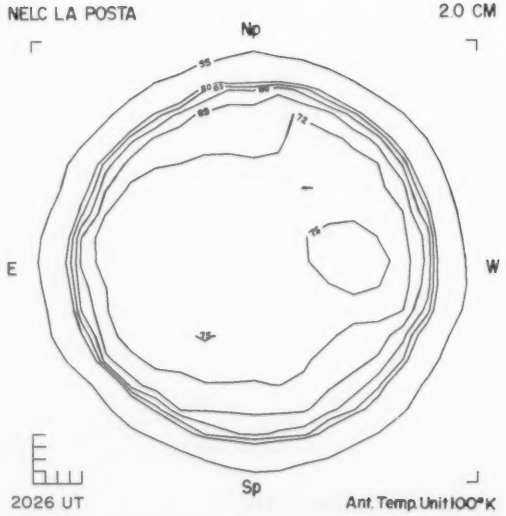
BOULDER



1515 UT

CORONA
KISLOVODSK

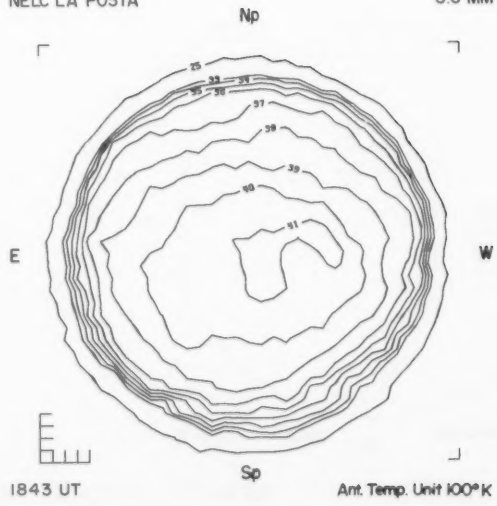
NELC LA POSTA



2026 UT

Ant. Temp. Unit 100°K

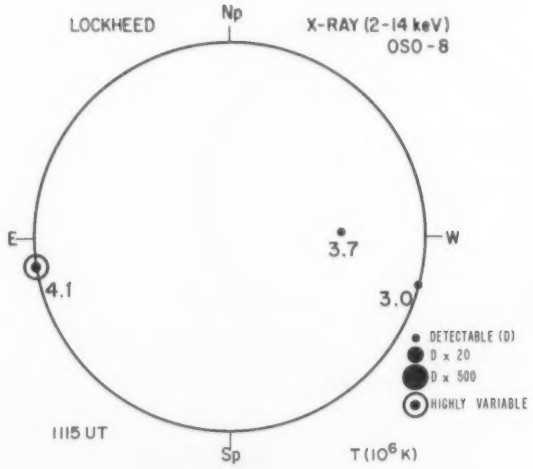
NELC LA POSTA

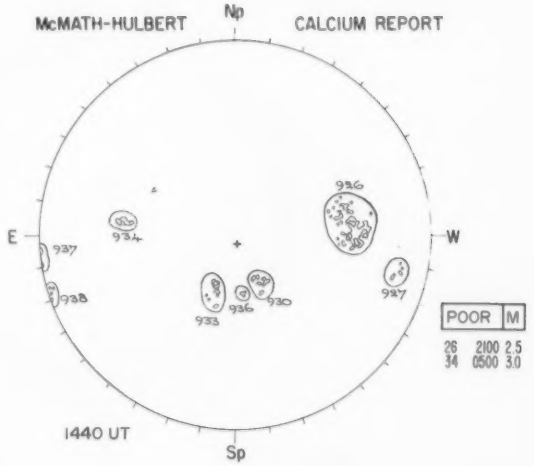


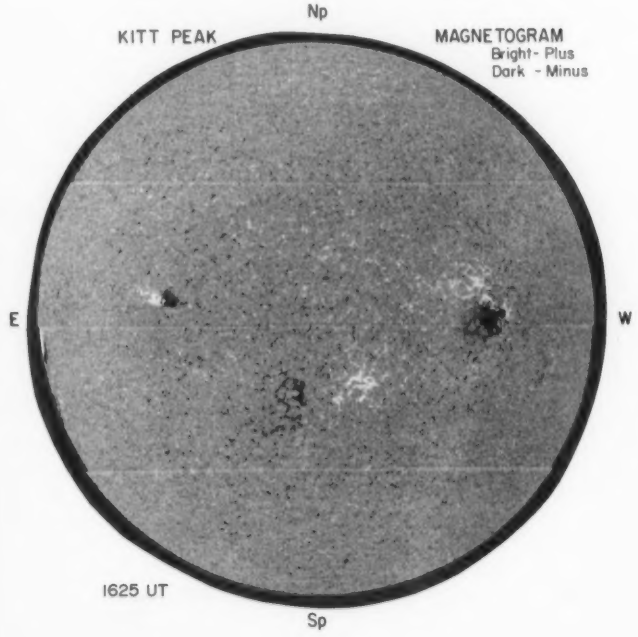
1843 UT

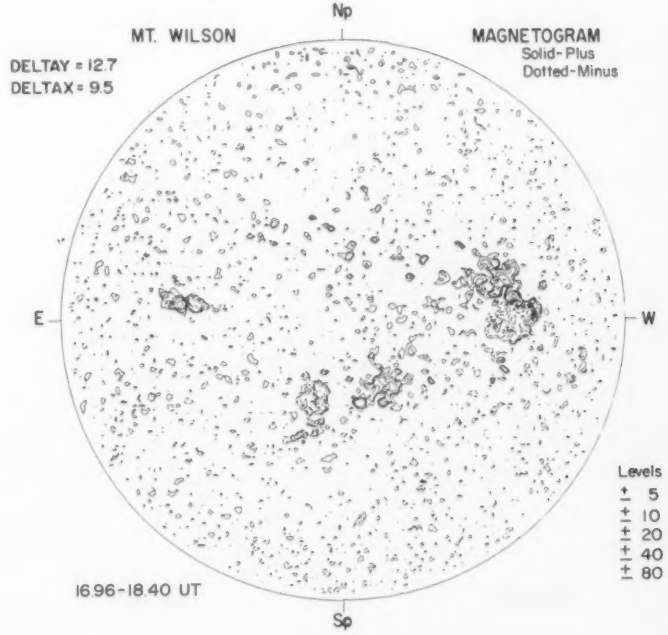
Ant. Temp. Unit 100°K

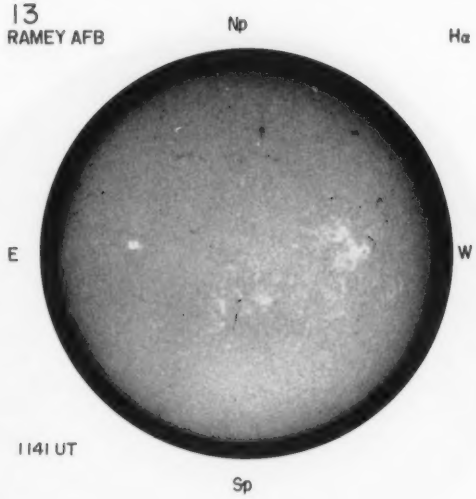
NOVEMBER 13, 1975 (P = 22.13, B_0 = 3.11, L_0 = 74.30)

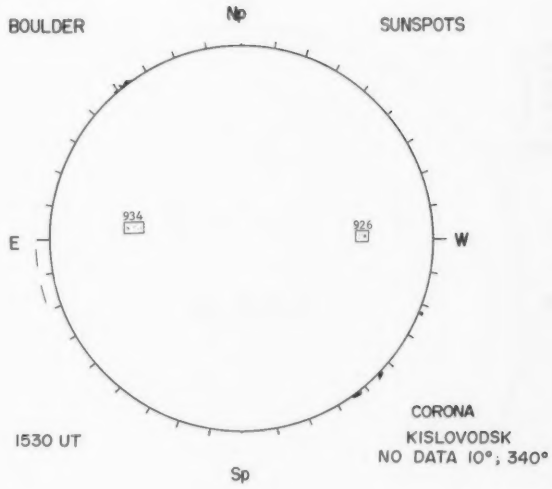


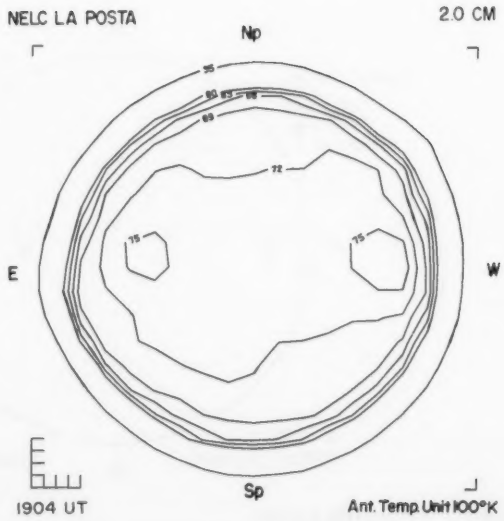


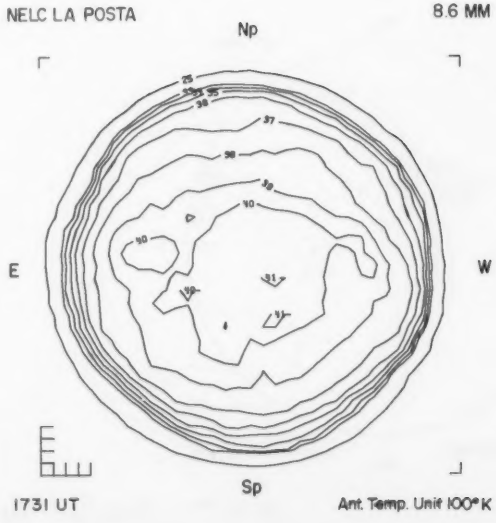




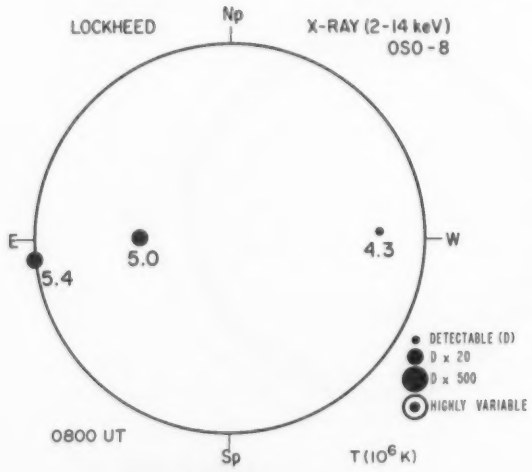

13
RAMEY AFB
Np
Hα
E
W
1141 UT
Sp

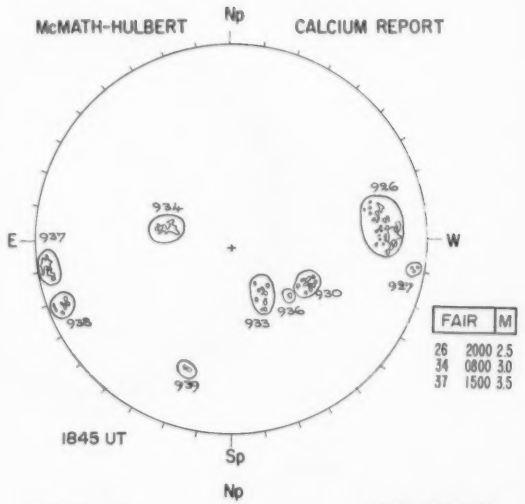

BOULDER
Np
SUNSPOTS
934
926
E
W
CORONA
KISLOVODSK
NO DATA 10°; 340°
1530 UT
Sp

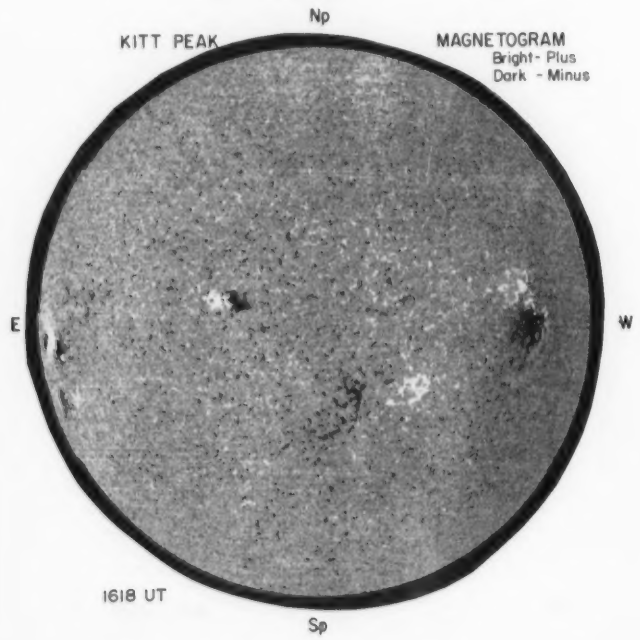

NELC LA POSTA
2.0 CM
Np
E
W
Sp
1904 UT
Ant. Temp. Unit 100°K

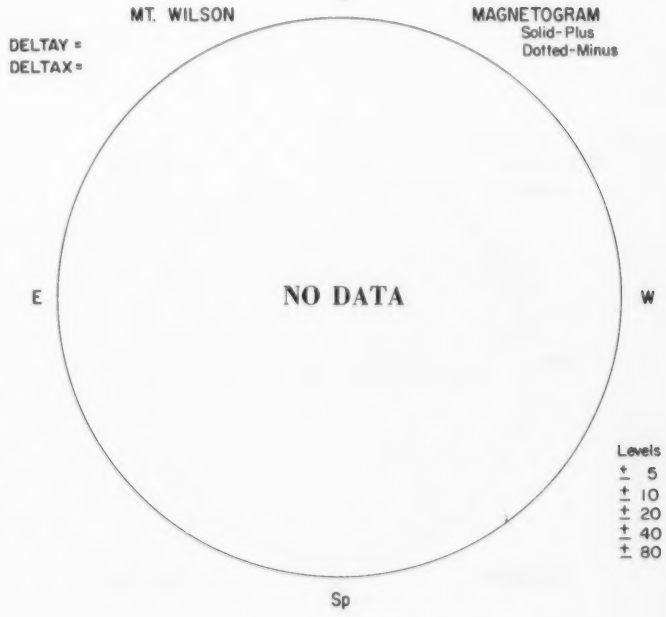

NELC LA POSTA
8.6 MM
Np
E
W
Sp
1731 UT
Ant. Temp. Unit 100°K

NOVEMBER 14, 1975 (P = 21.87, B_0 = 2.99, L_0 = 61.12)



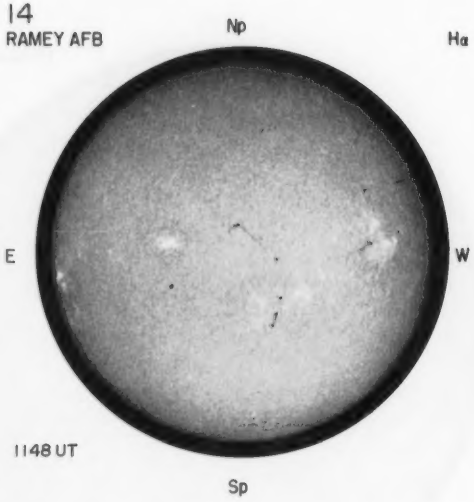






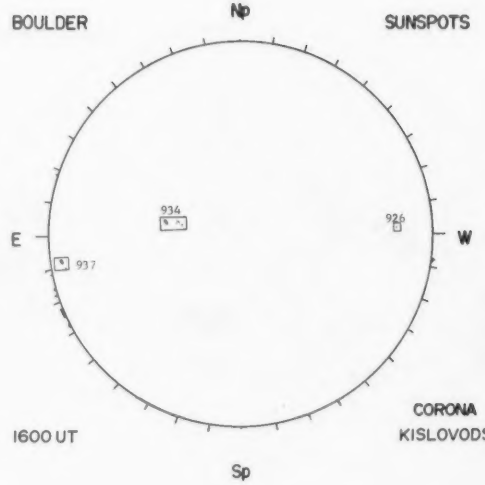
14

RAMEY AFB



1148 UT

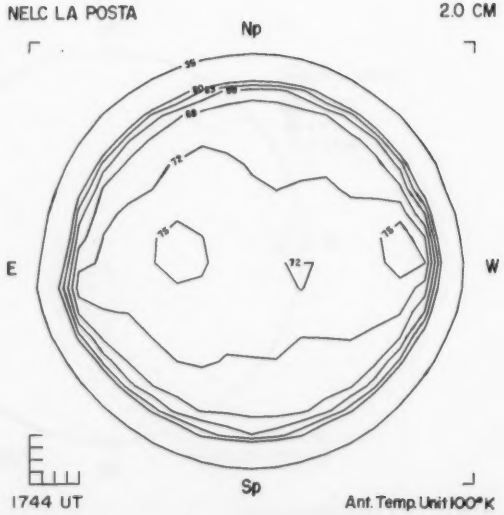
BOULDER



1600 UT

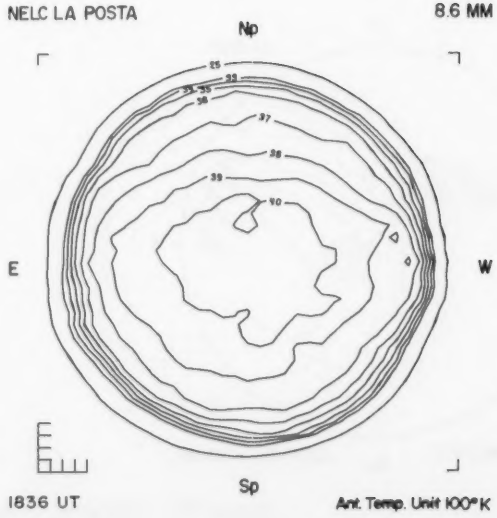
CORONA
KISLOVODSK

NELC LA POSTA



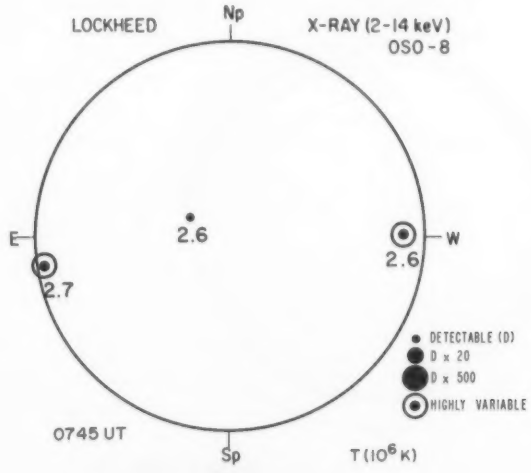
1744 UT

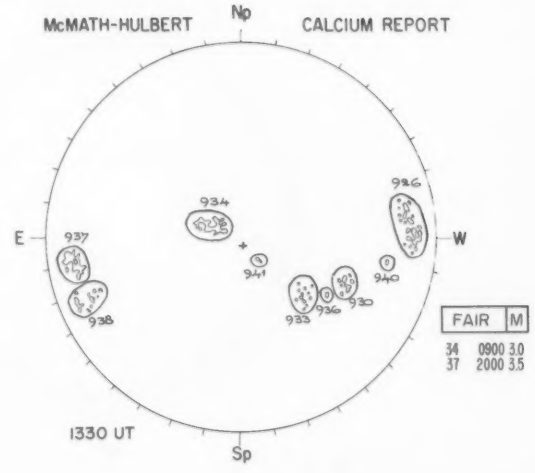
NELC LA POSTA

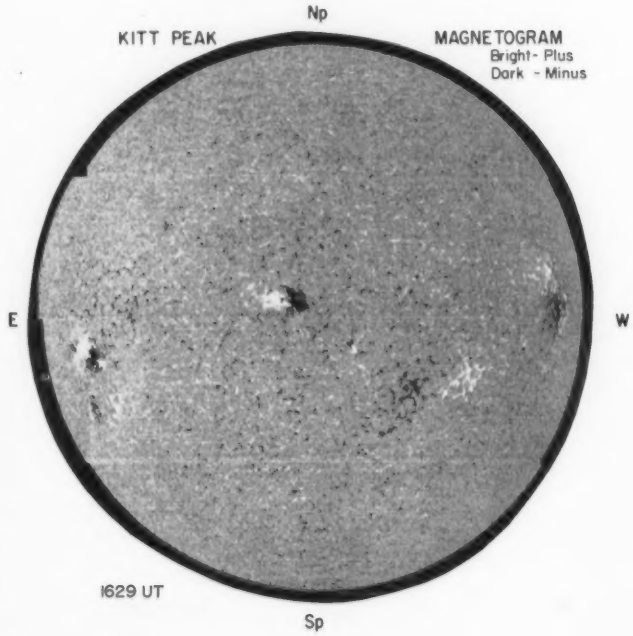


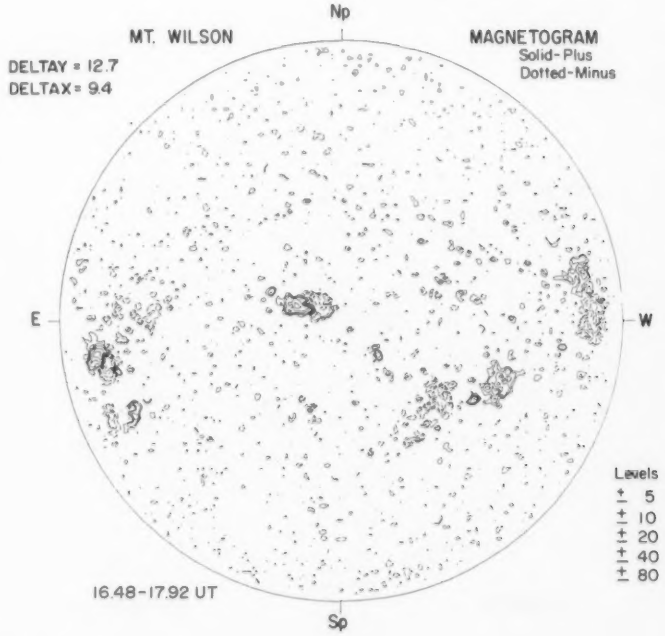
1836 UT

NOVEMBER 15, 1975 (P = 21.61, B_o = 2.88, L_o = 47.93)



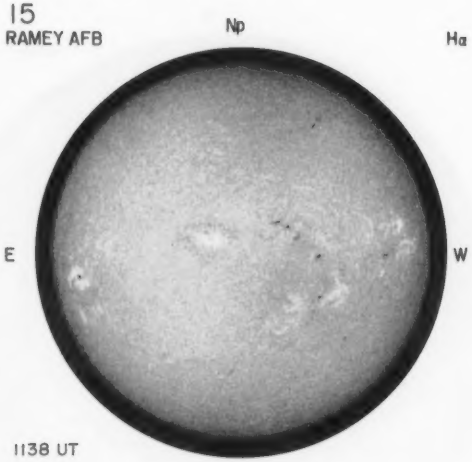






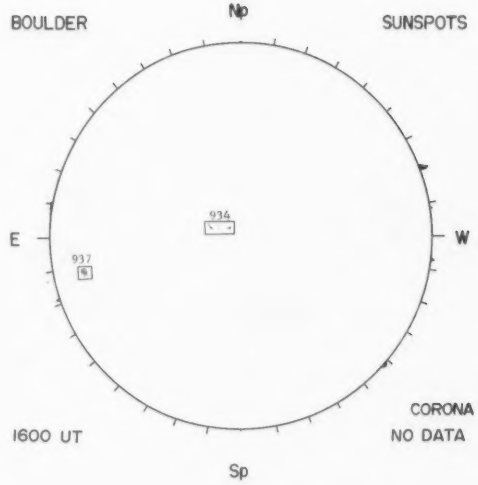
15

RAMEY AFB



1138 UT

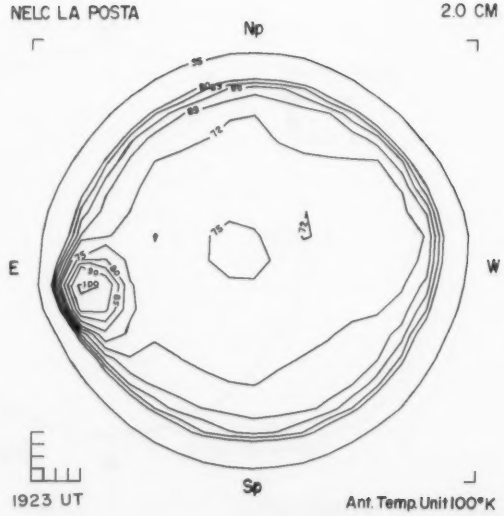
BOULDER



1600 UT

CORONA
NO DATA

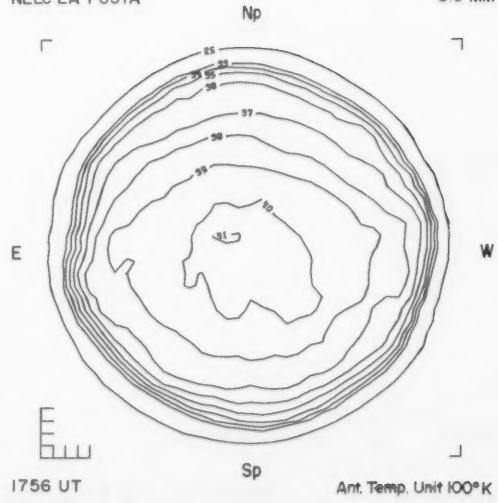
NELC LA POSTA



1923 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

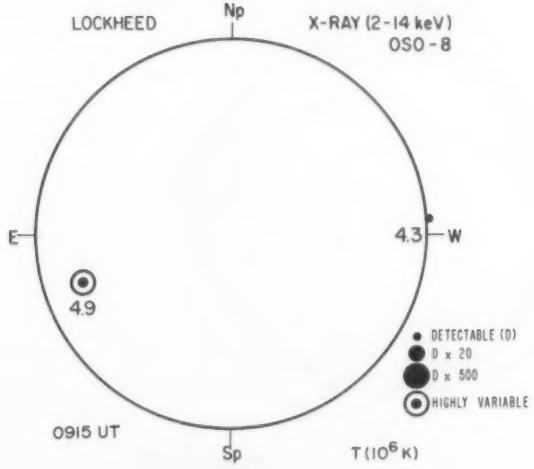


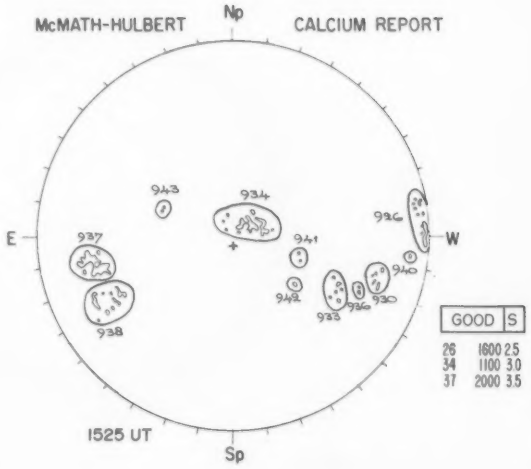
1756 UT

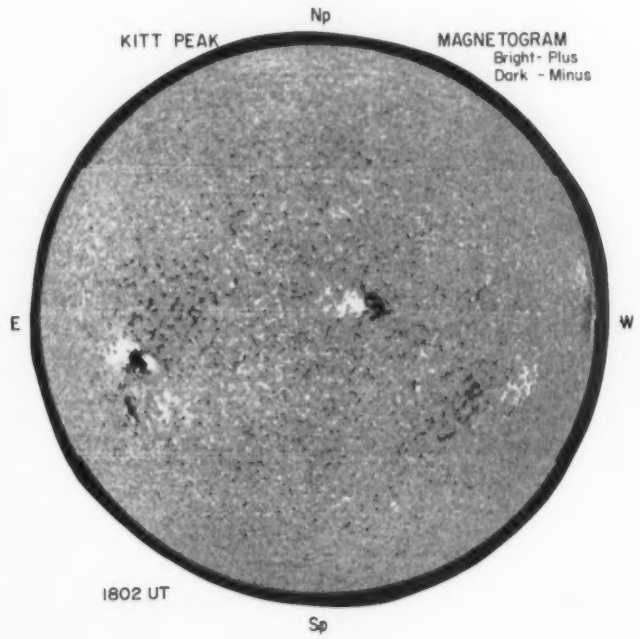
Ant. Temp. Unit 100°K

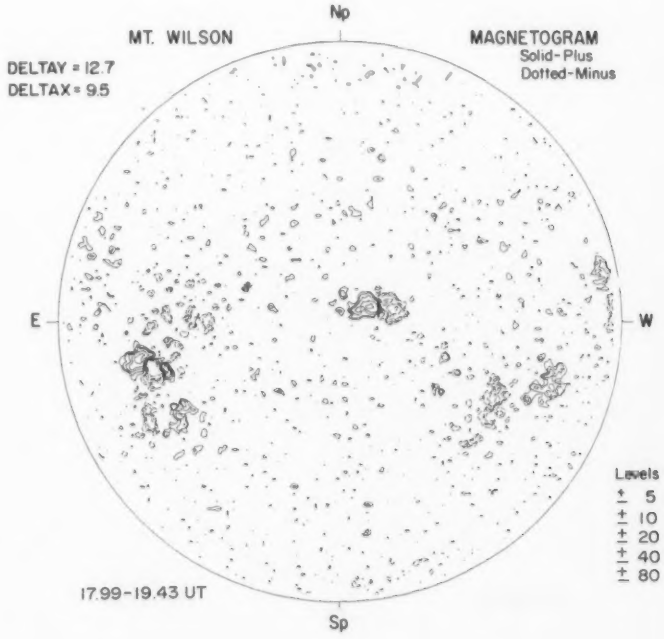
55
Nov 75

NOVEMBER 16, 1975 (P = 21.33, B_0 = 2.76, L_0 = 34.75)



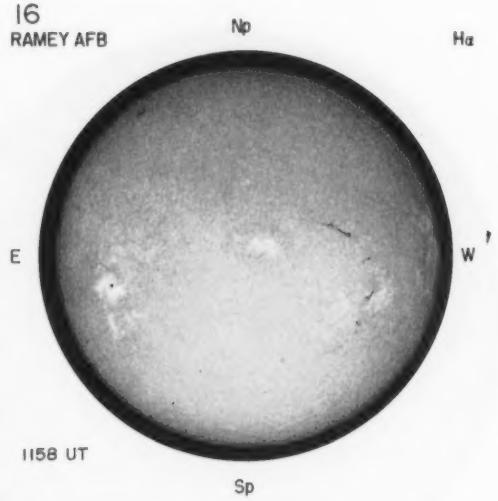






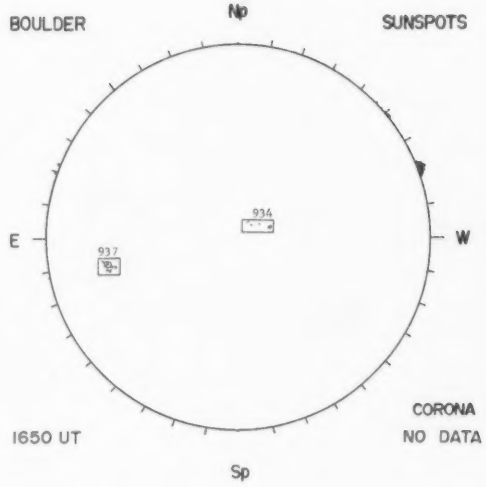
16

RAMEY AFB



1158 UT

BOULDER



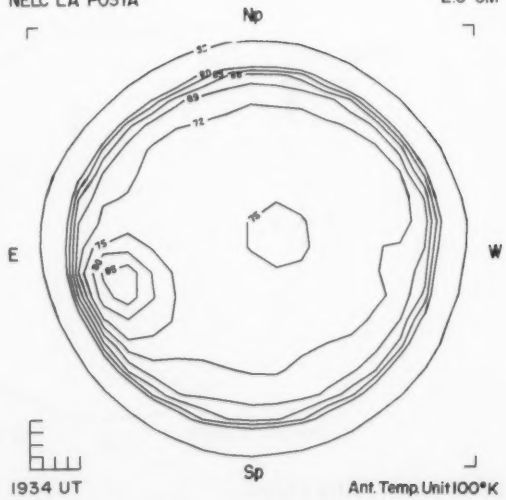
1650 UT

CORONA

NO DATA

NELC LA POSTA

2.0 CM

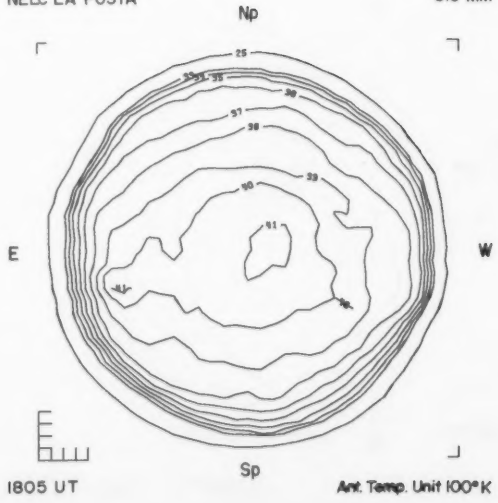


1934 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

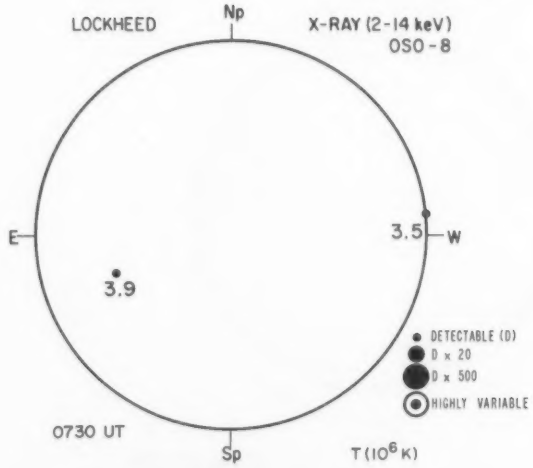
8.6 MM

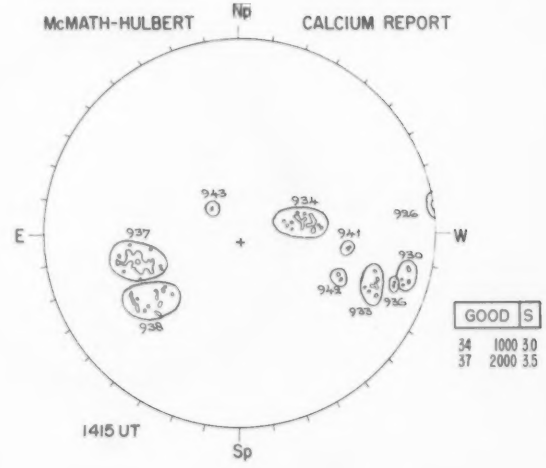


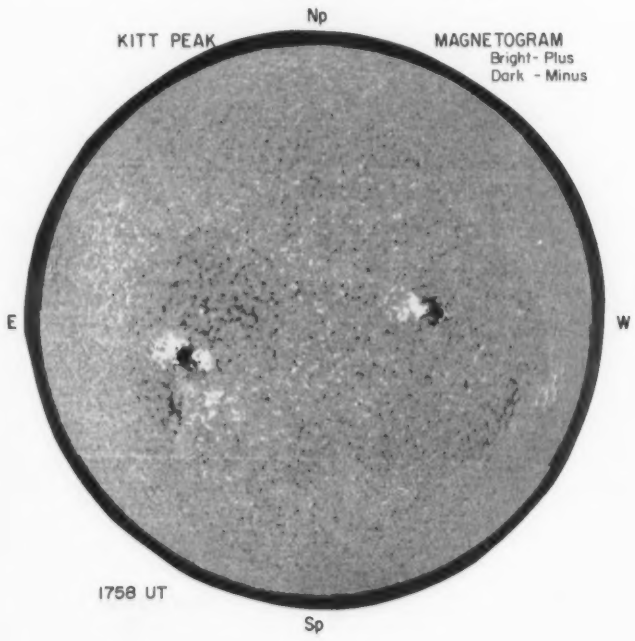
1805 UT

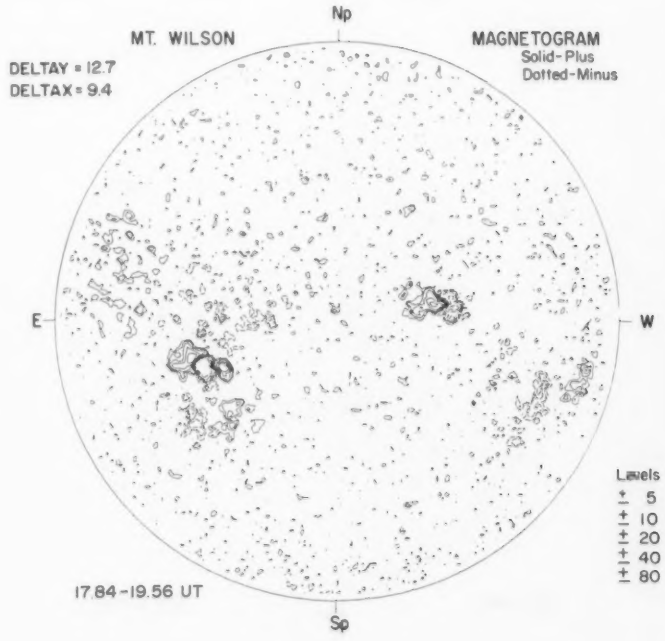
Ant. Temp. Unit 100°K

NOVEMBER 17, 1975 (P = 21.05, B_o = 2.64, L_o = 21.57)



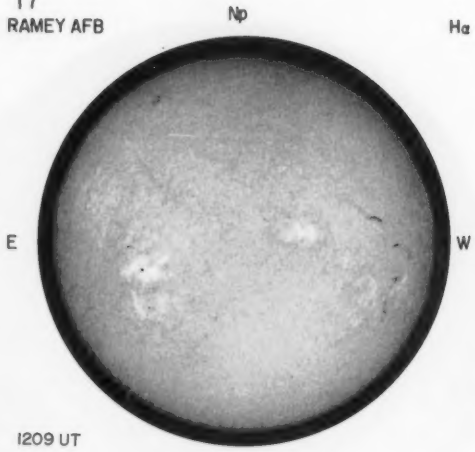






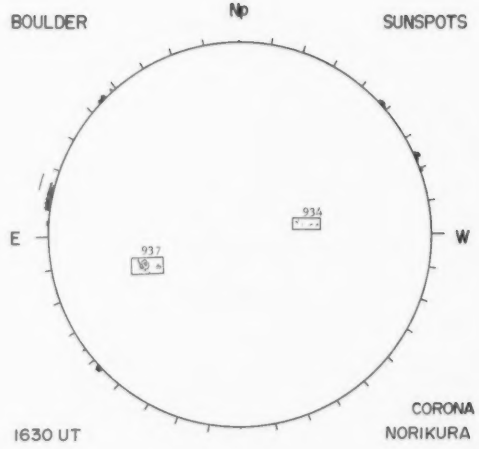
17

RAMEY AFB



1209 UT

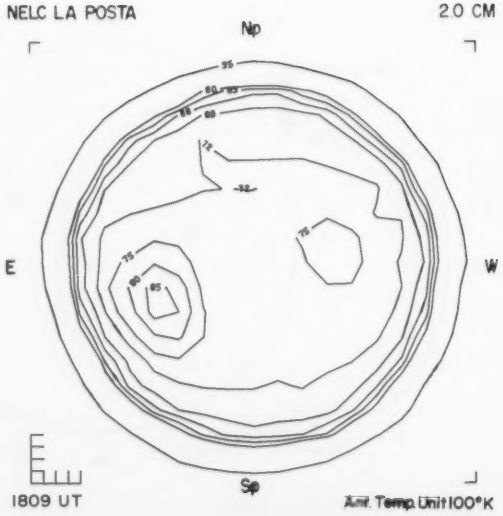
BOULDER



CORONA
NORIKURA

1630 UT

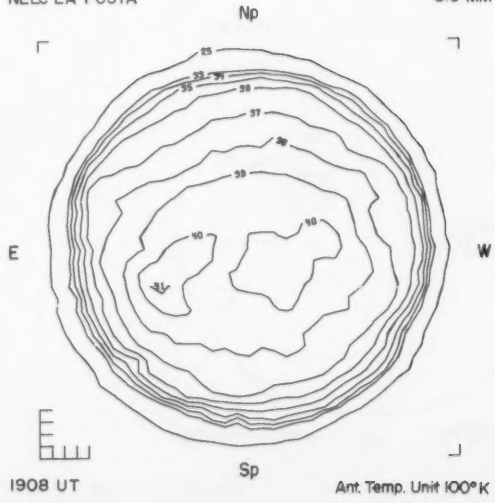
NELC LA POSTA



1809 UT

Ant. Temp. Unit 100°K

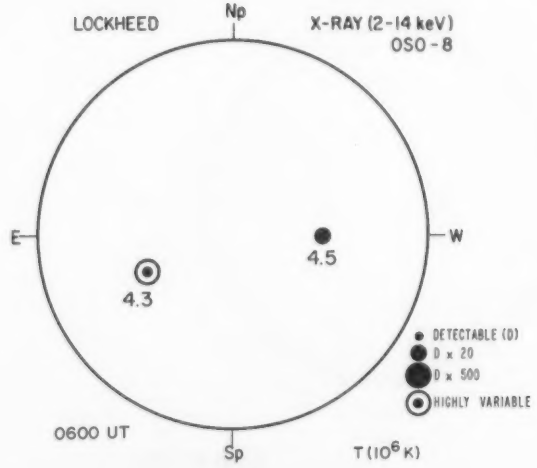
NELC LA POSTA

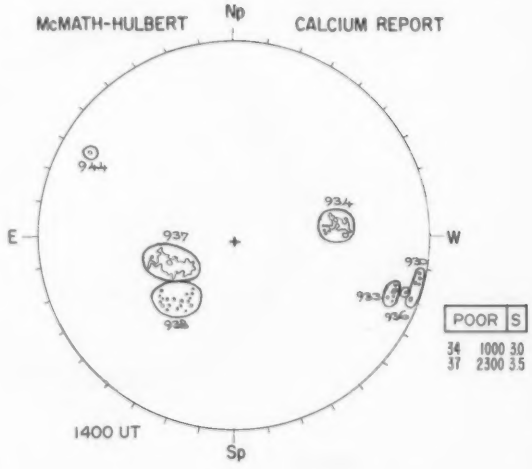


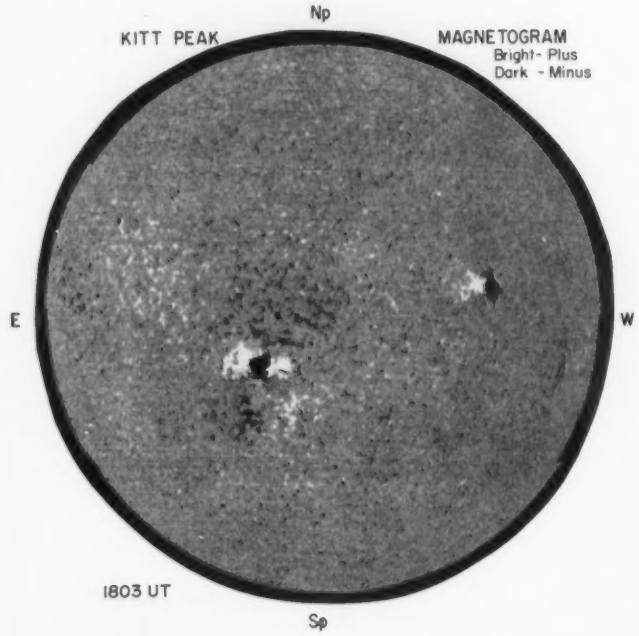
1908 UT

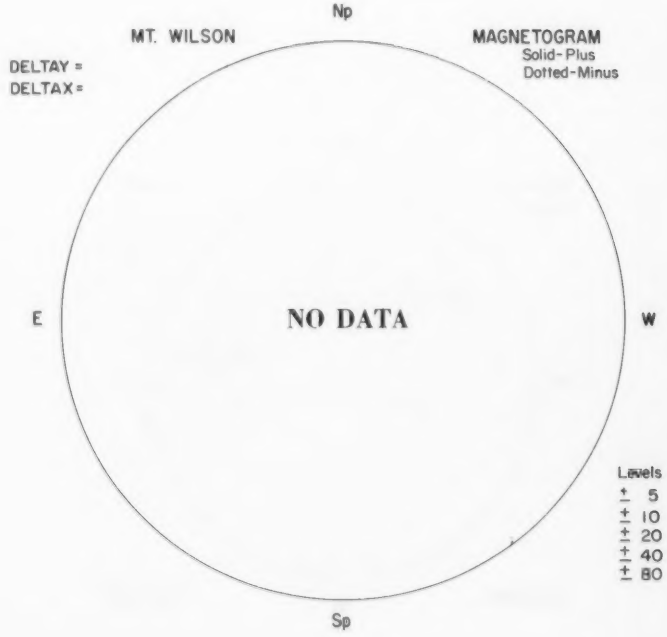
Ant. Temp. Unit 100°K

NOVEMBER 18, 1975 (P = 20.76, B_o = 2.52, L_o = 8.38)

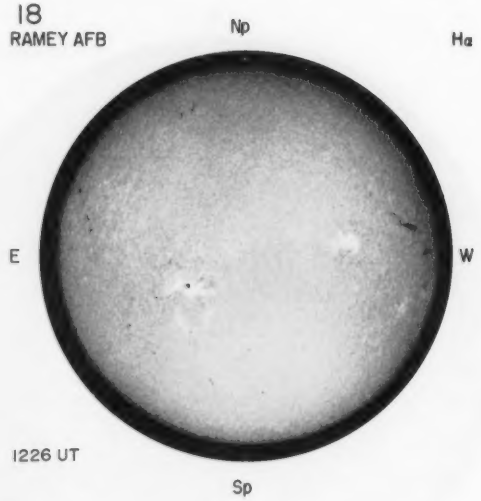




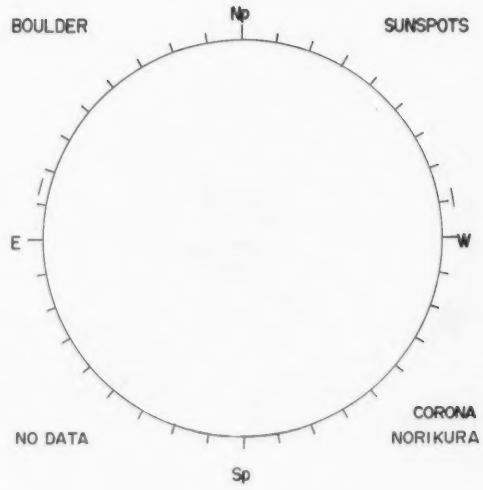




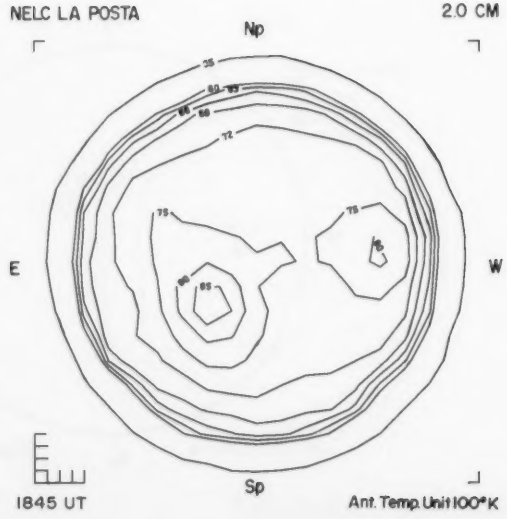
18
RAMEY AFB



BOULDER

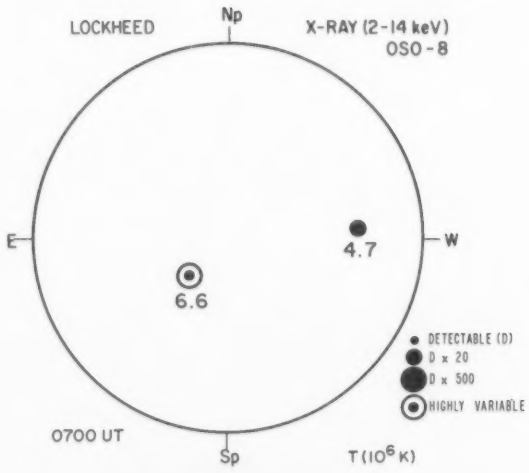


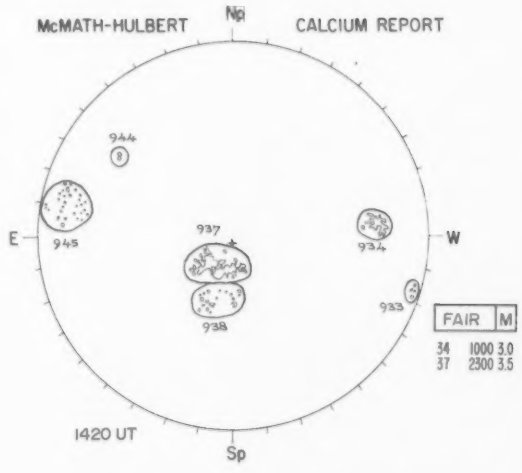
NELC LA POSTA

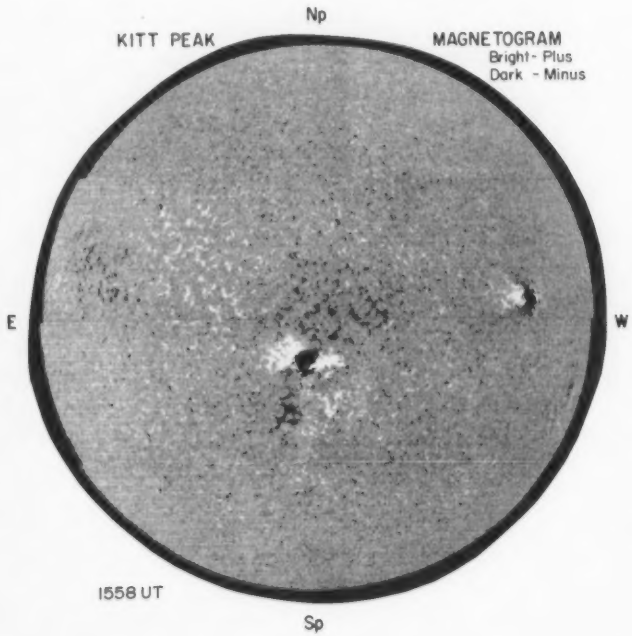


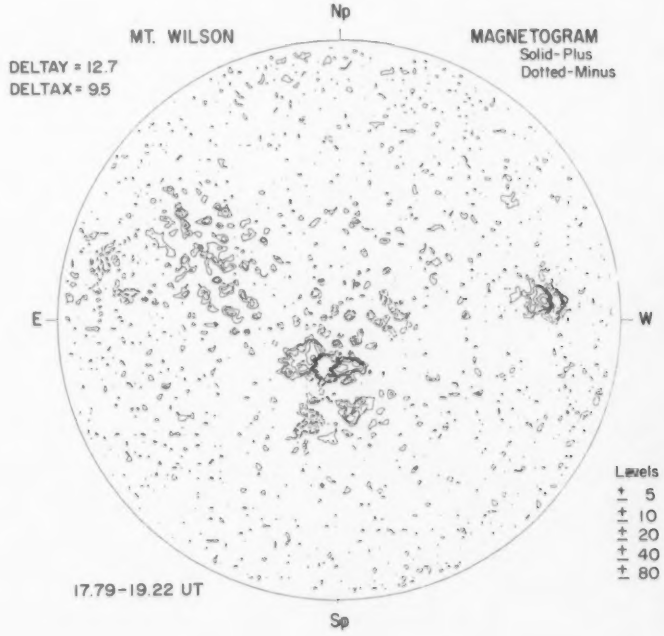
NELC LA POSTA

NOVEMBER 19, 1975 (P = 20.46, B_0 = 2.40, L_0 = 355.20)



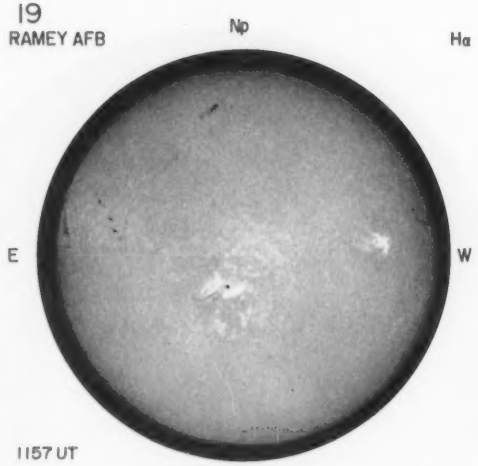




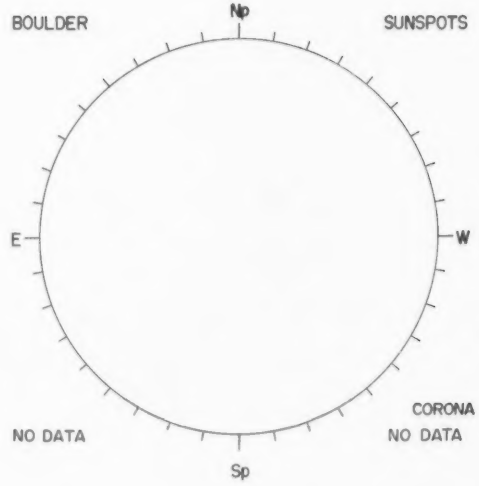


19

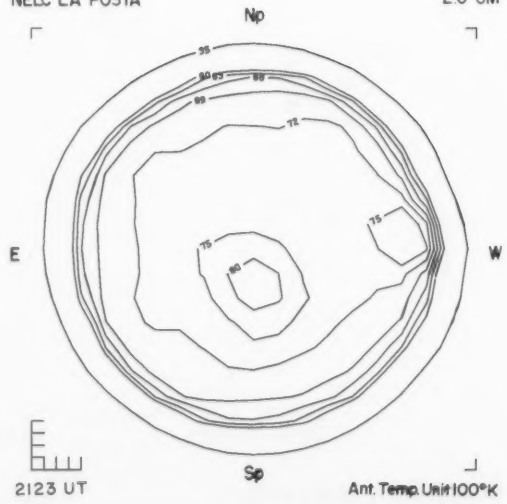
RAMEY AFB



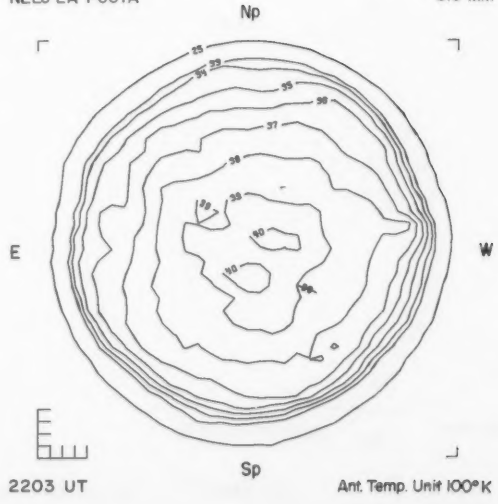
BOULDER



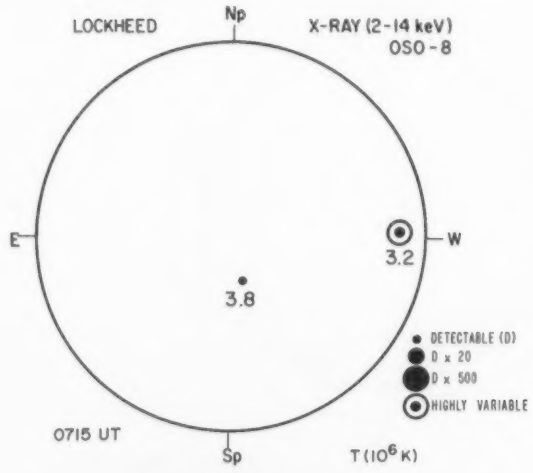
NELC LA POSTA

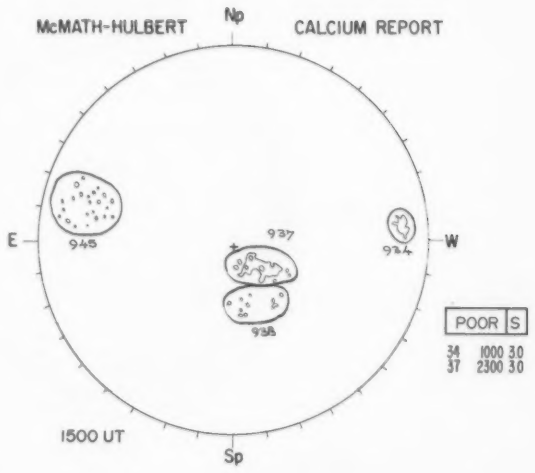


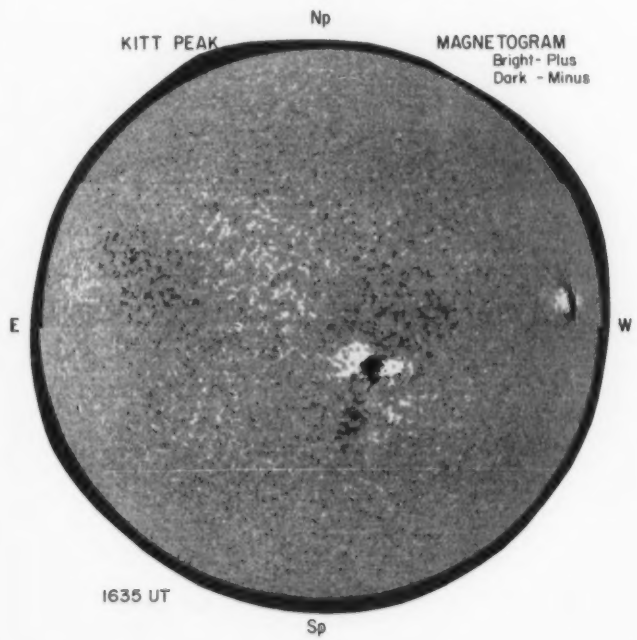
NELC LA POSTA

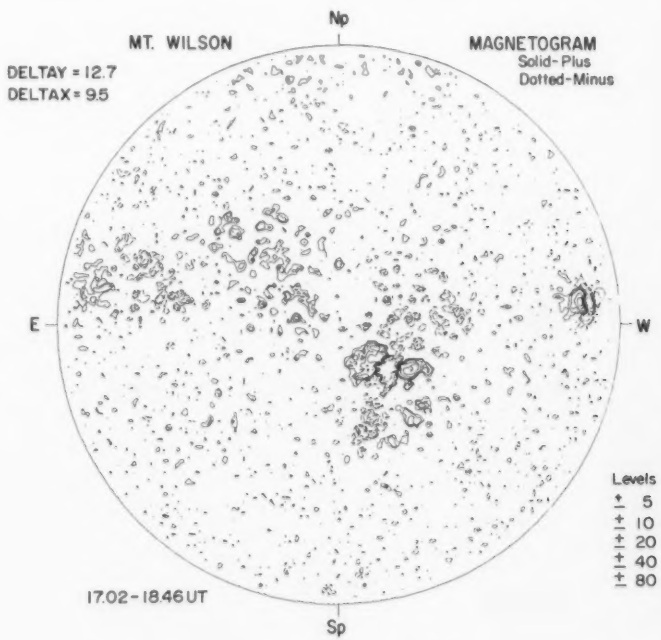


NOVEMBER 20, 1975 (P = 20.16, B_o = 2.28, L_o = 342.02)



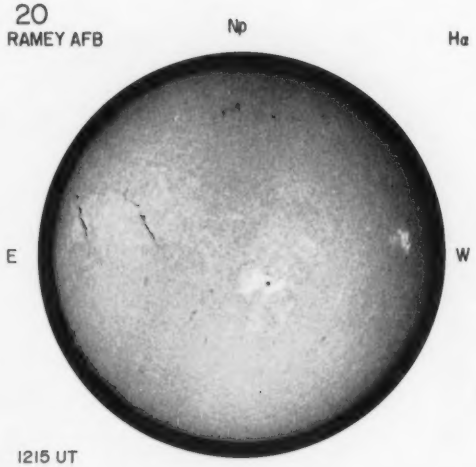






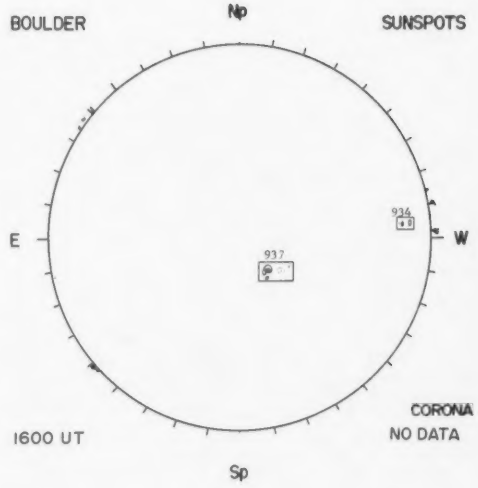
20

RAMEY AFB



1215 UT

BOULDER



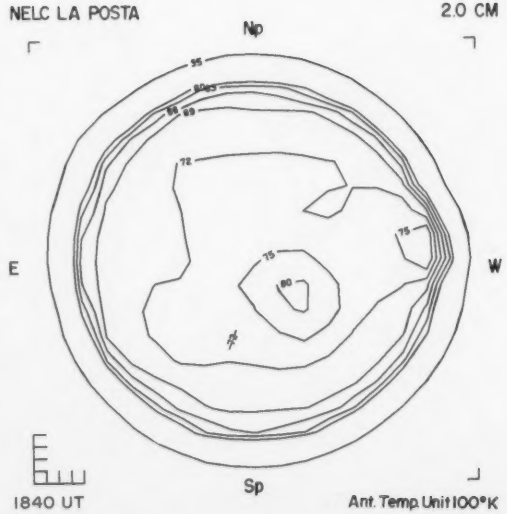
1600 UT

CORONA

NO DATA

NELC LA POSTA

2.0 CM

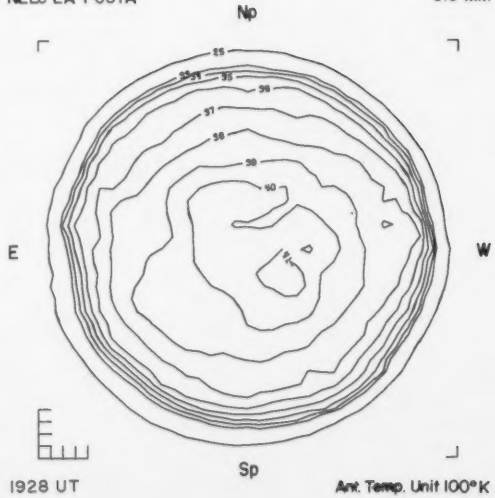


1840 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM



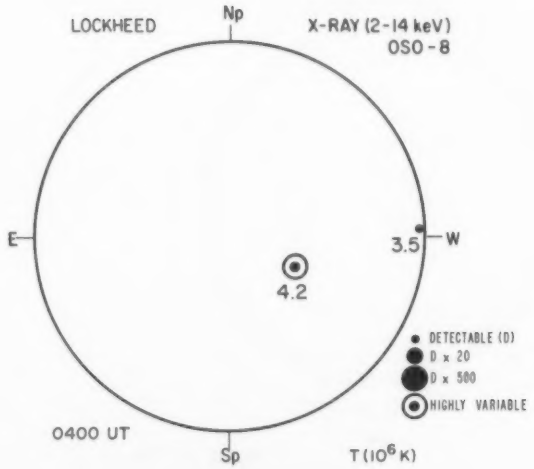
1928 UT

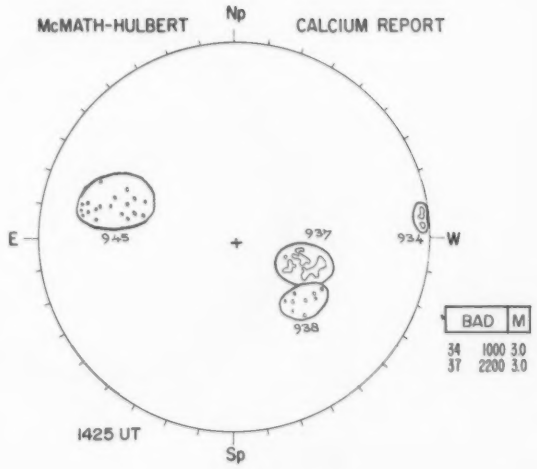
Ant. Temp. Unit 100°K

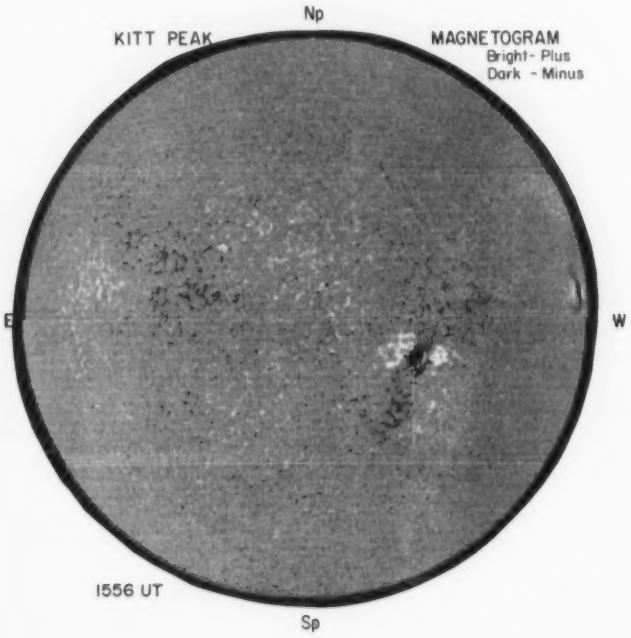
65

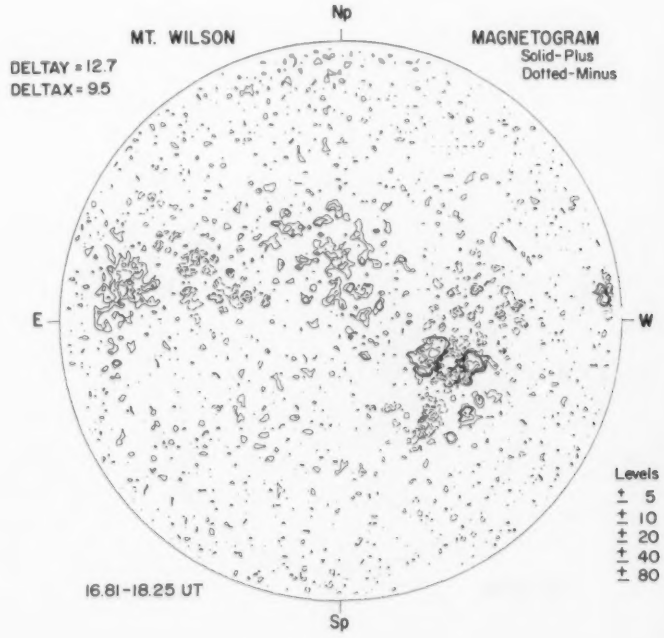
Nov 75

NOVEMBER 21, 1975 (P =19.85, B_0 =2.16, L_0 =328.84)



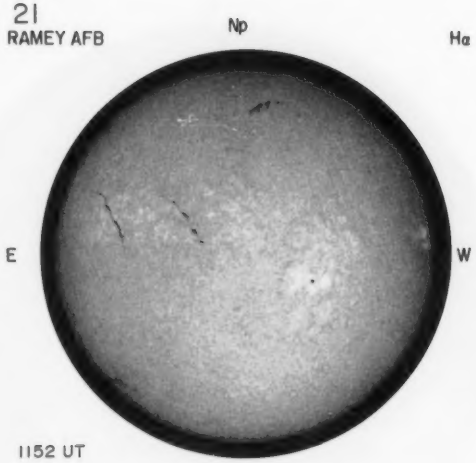






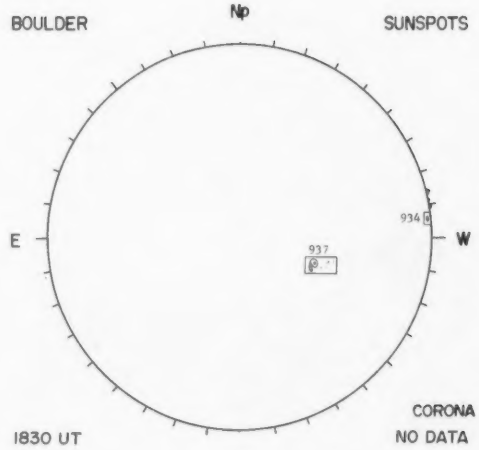
21

RAMEY AFB



1152 UT

BOULDER

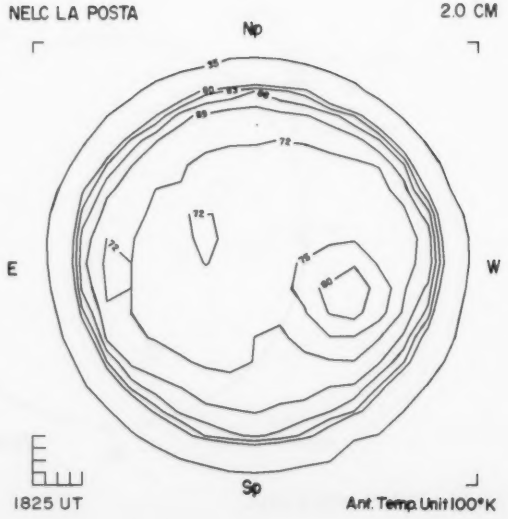


CORONA

NO DATA

1830 UT

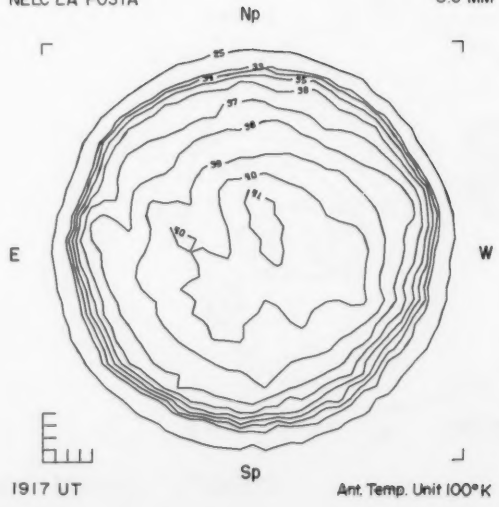
NELC LA POSTA



1825 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

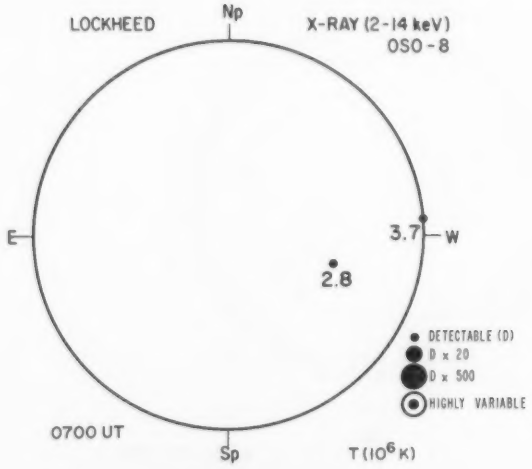


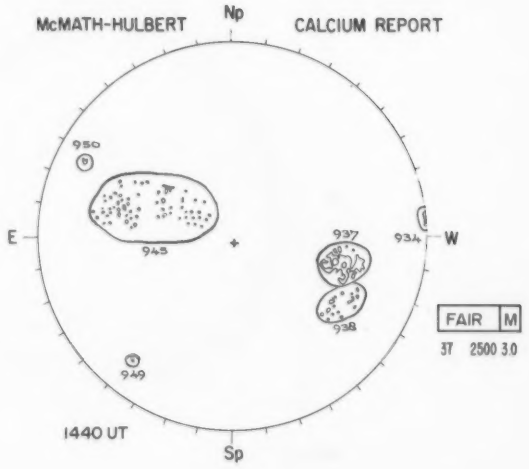
1917 UT

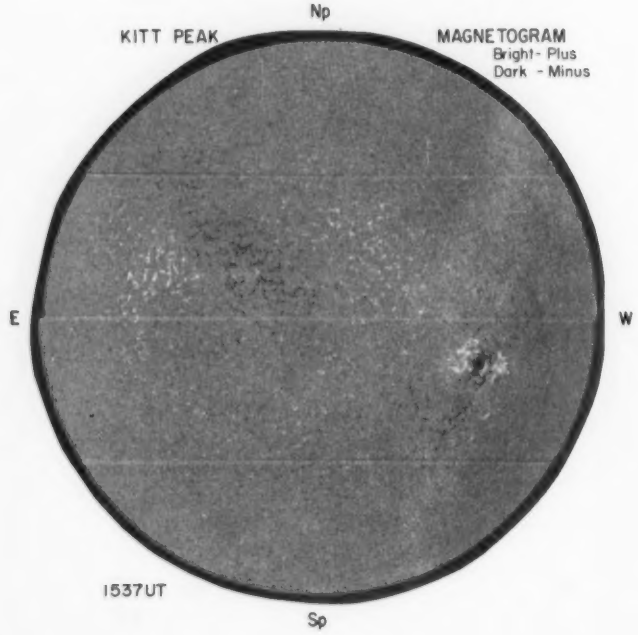
Ant. Temp. Unit 100°K

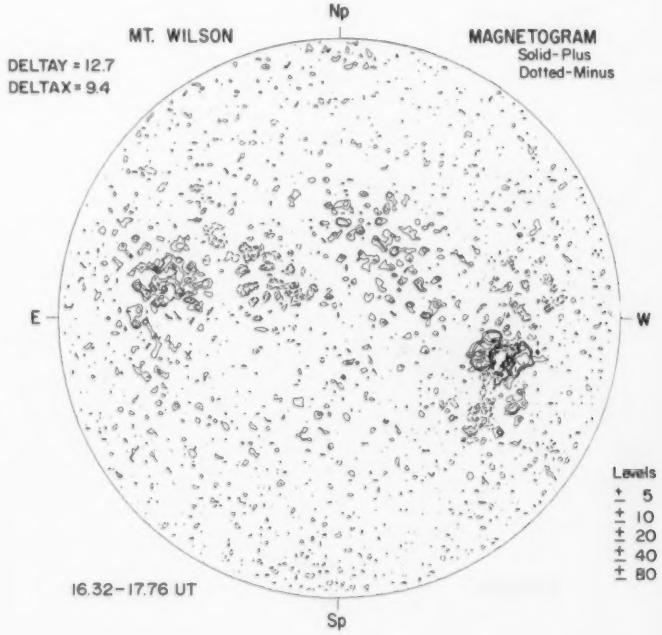
67
Nov 75

NOVEMBER 22, 1975 (P =19.53, B_o =2.04, L_o =315.66)



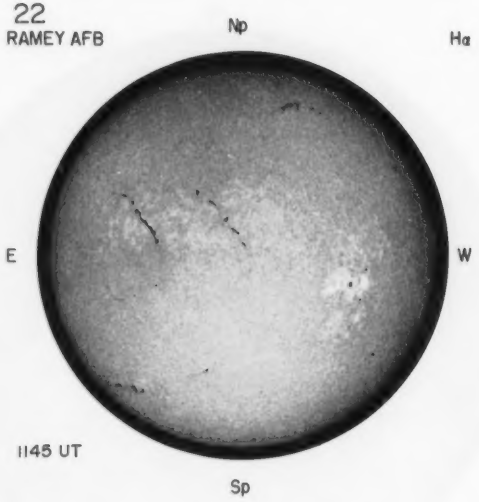




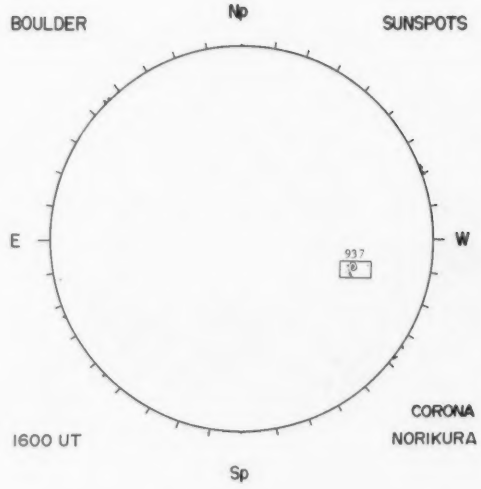


22

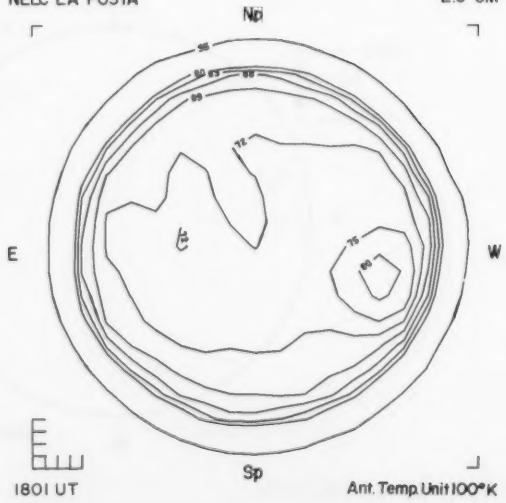
RAMEY AFB



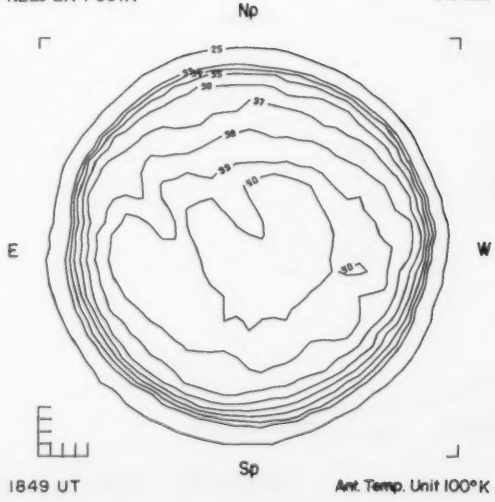
BOULDER



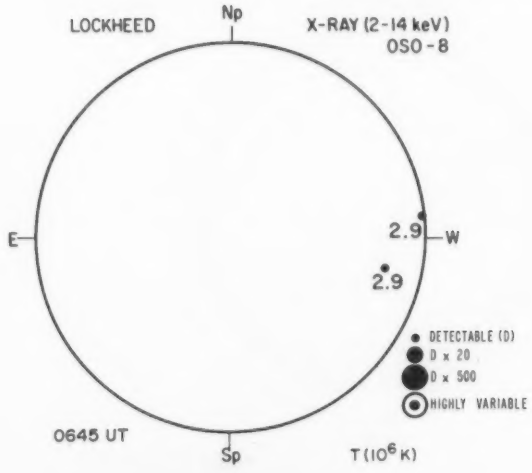
NELC LA POSTA

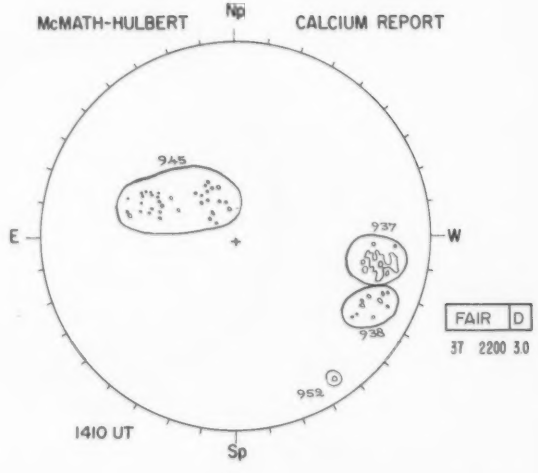


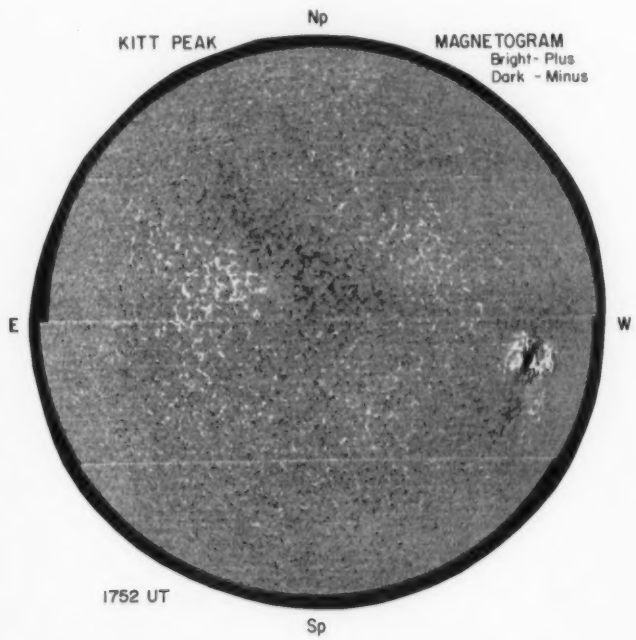
NELC LA POSTA

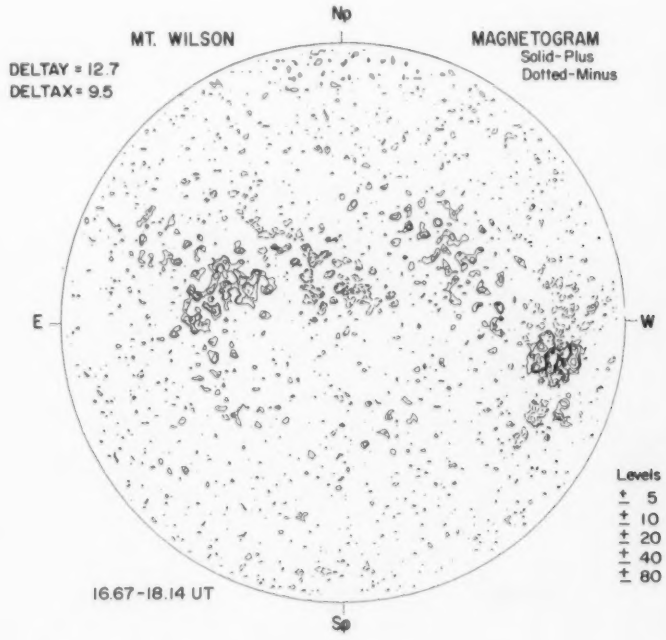


NOVEMBER 23, 1975 (P = 19.20, B_0 = 1.92, L_0 = 302.48)



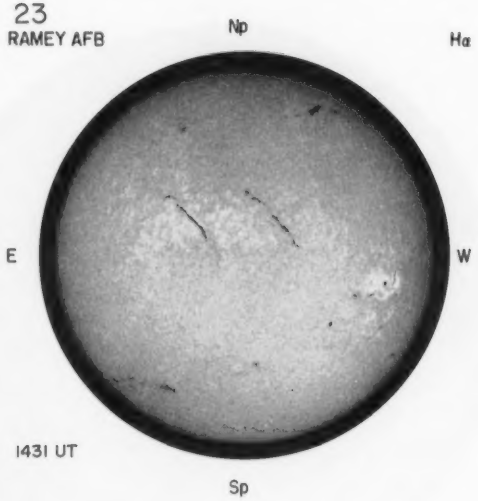






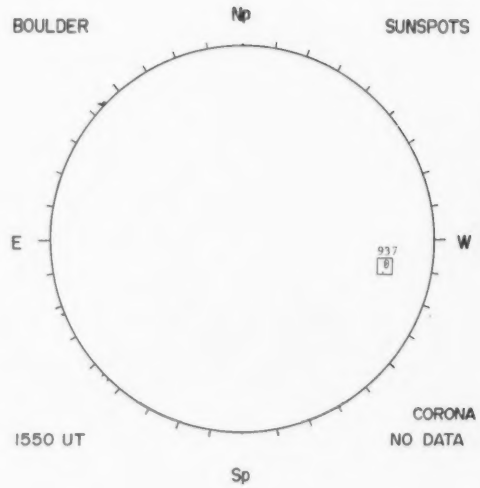
23

RAMEY AFB



1431 UT

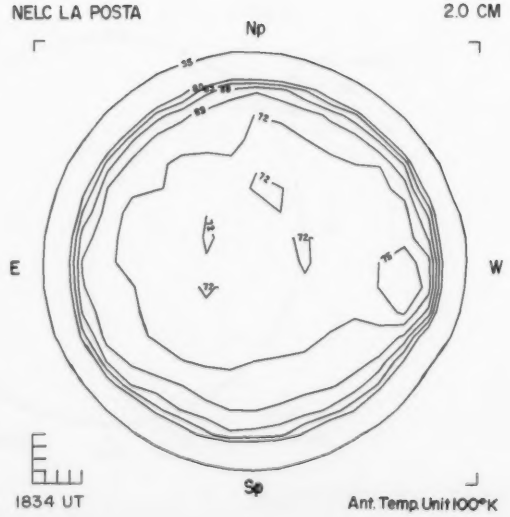
BOULDER



1550 UT

CORONA
NO DATA

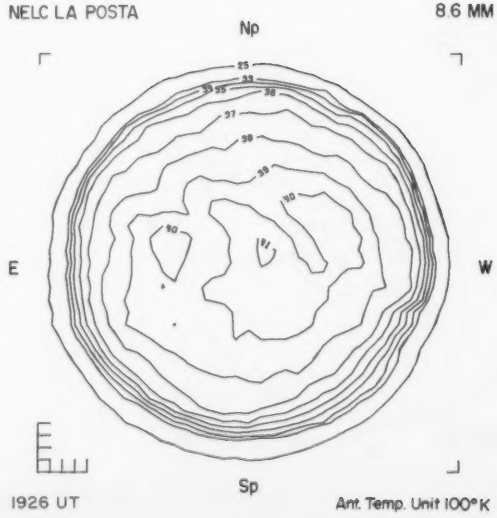
NELC LA POSTA



1834 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

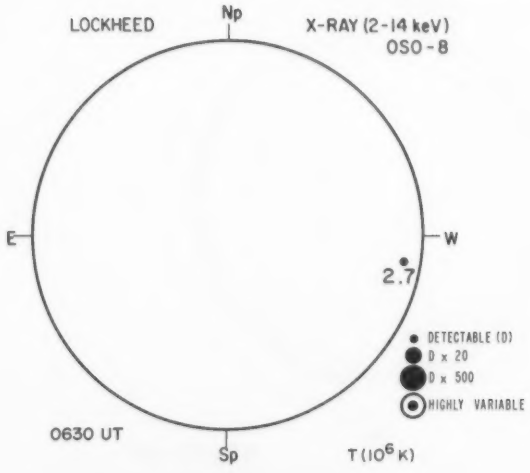


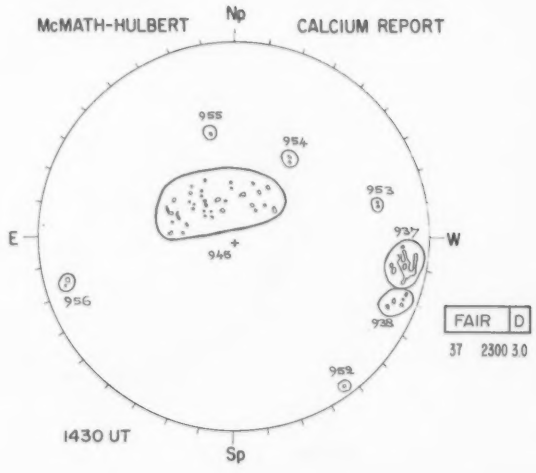
1926 UT

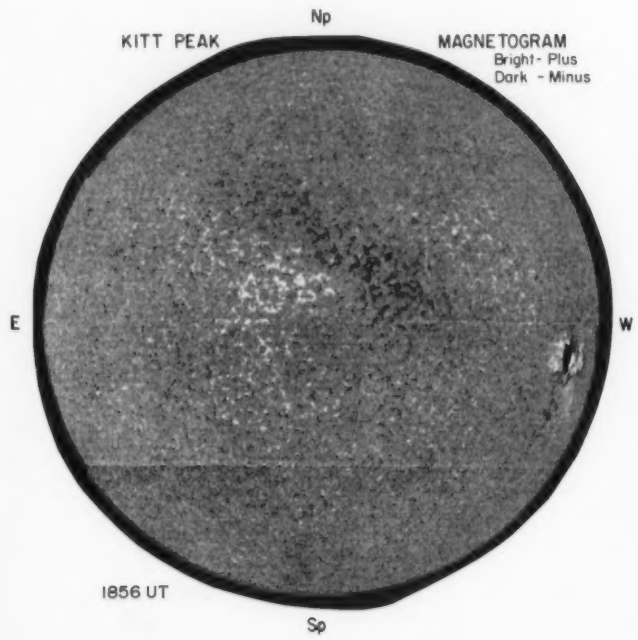
Ant. Temp. Unit 100°K

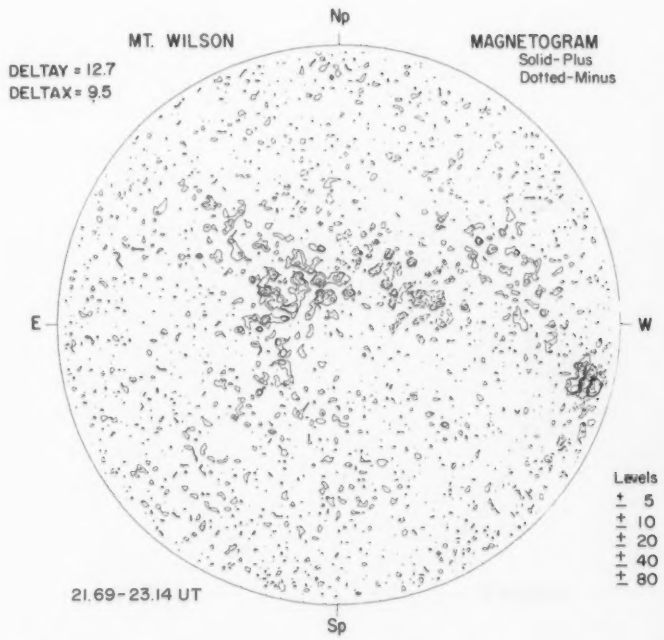
71
Nov 75

NOVEMBER 24, 1975 (P = 18.87, B_0 = 1.79, L_0 = 289.29)



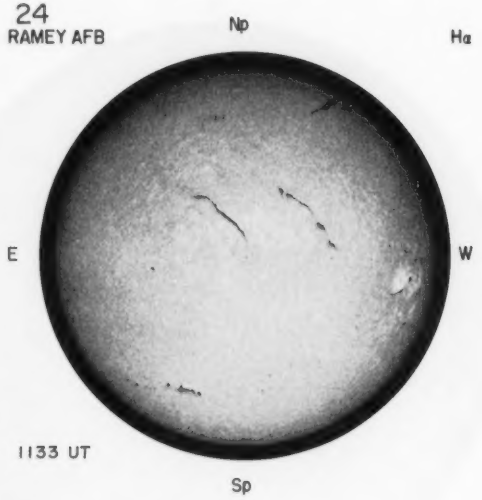






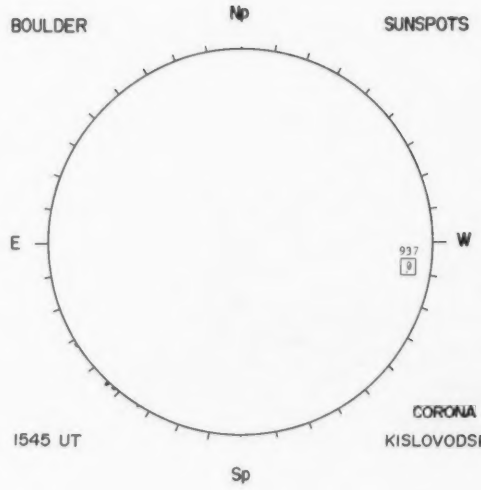
24

RAMEY AFB



1133 UT

BOULDER



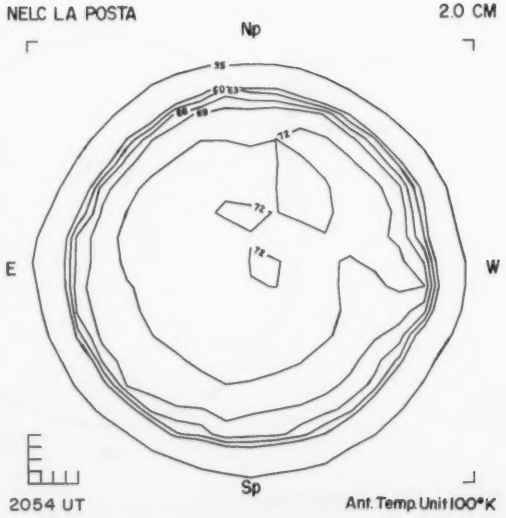
CORONA

1545 UT

KISLOVODSK

NELC LA POSTA

2.0 CM



2054 UT

Ant. Temp. Unit 100°K

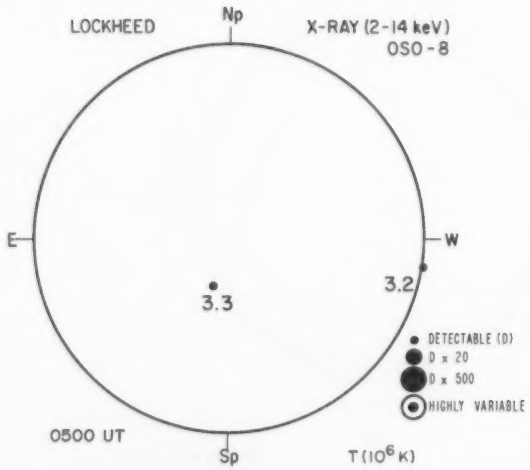
NELC LA POSTA

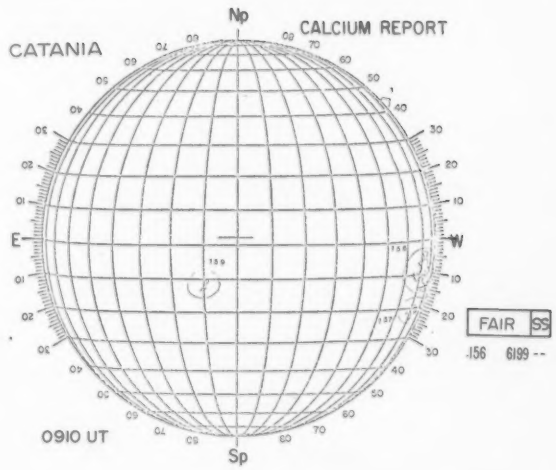
8.6 MM

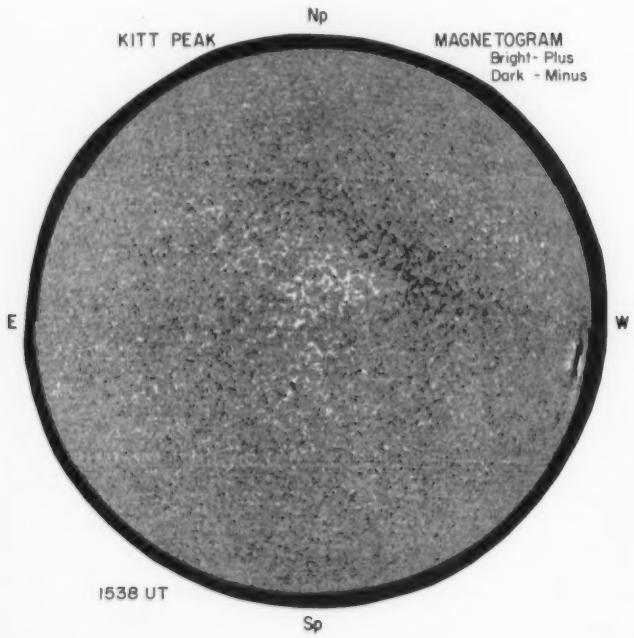
2203 UT

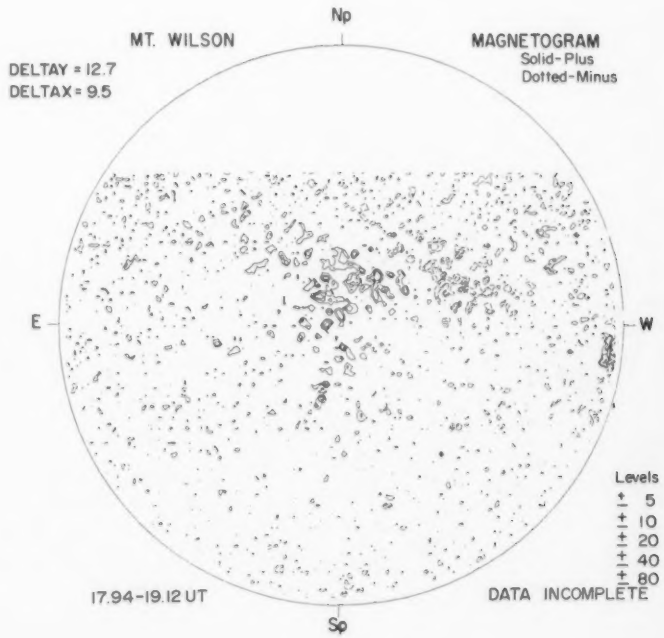
Ant. Temp. Unit 100°K

NOVEMBER 25, 1975 (P =18.53, B_0 =1.67, L_0 =276.11)



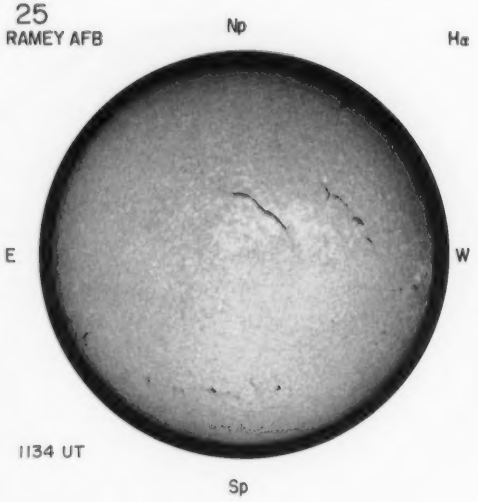






25

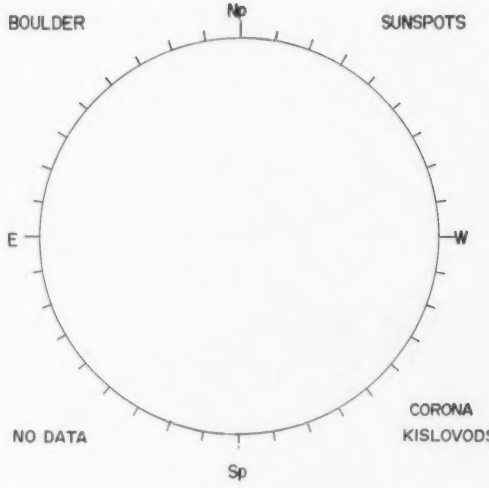
RAMEY AFB



1134 UT

BOULDER

SUNSPOTS

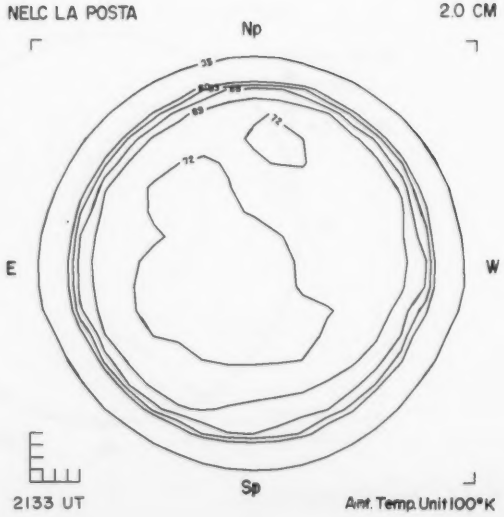


NO DATA

CORONA
KISLOVODSK

NELC LA POSTA

2.0 CM

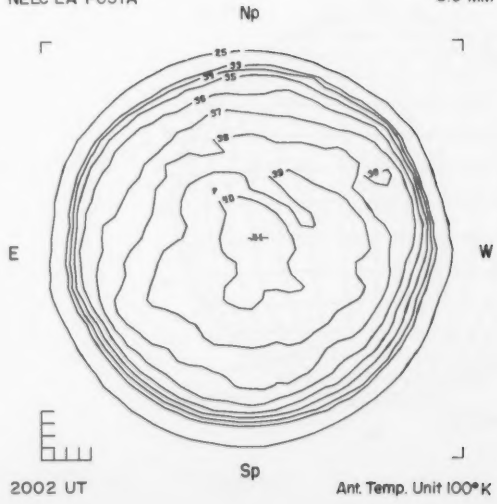


2133 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM

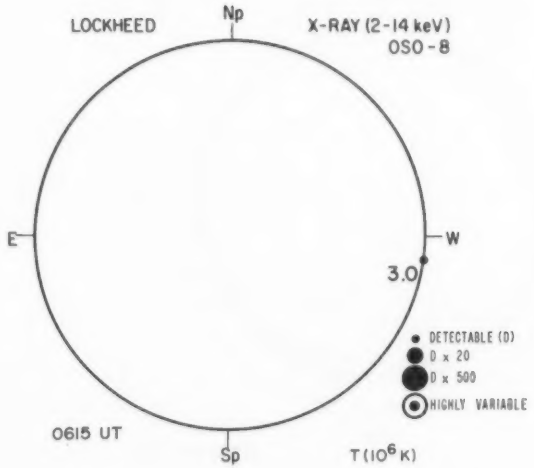


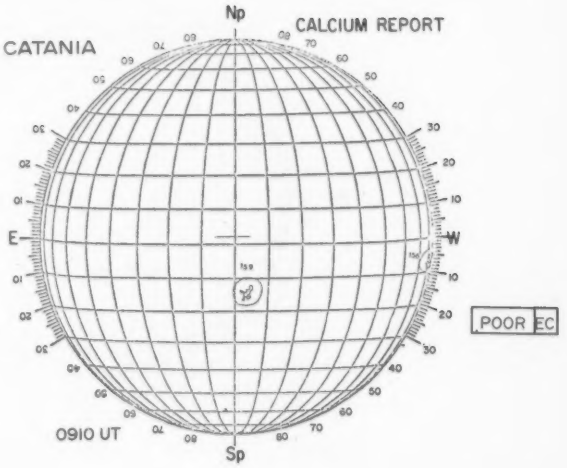
2002 UT

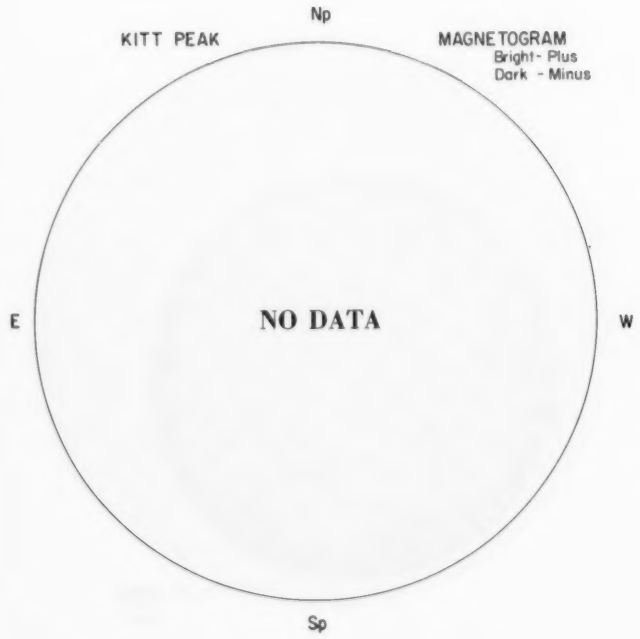
Ant. Temp. Unit 100°K

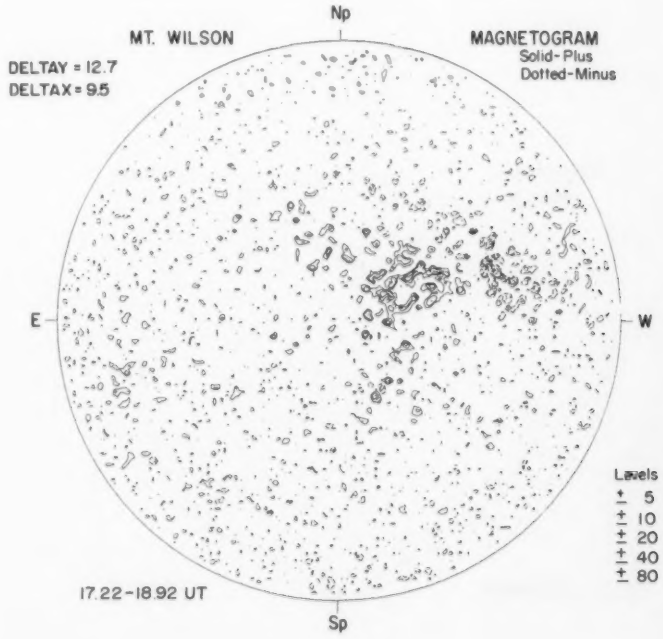
75
Nov 75

NOVEMBER 26, 1975 (P =18.18, B_0 =1.54, L_0 =262.93)



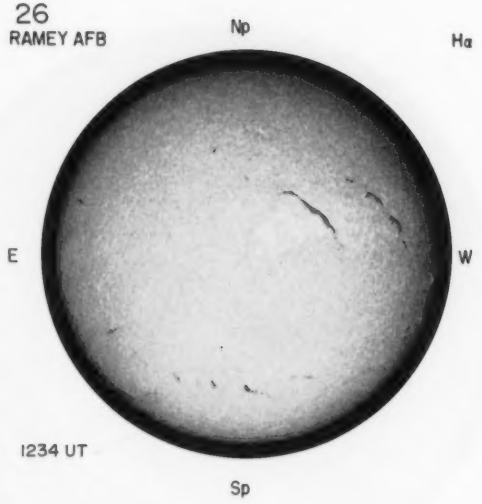






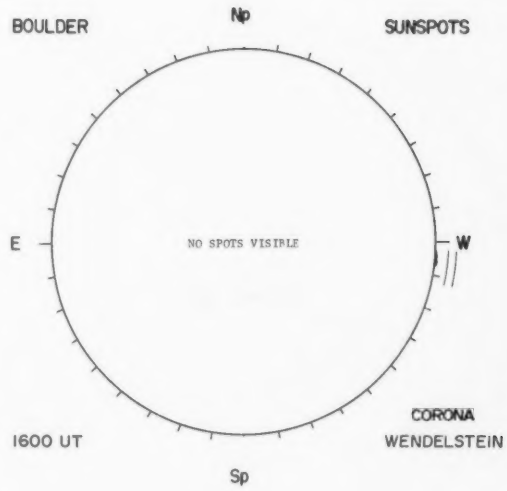
26

RAMEY AFB



1234 UT

BOULDER



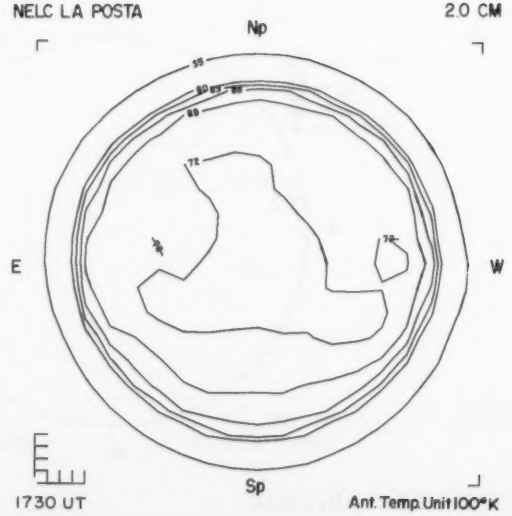
1600 UT

CORONA

WENDELSTEIN

NELC LA POSTA

2.0 CM

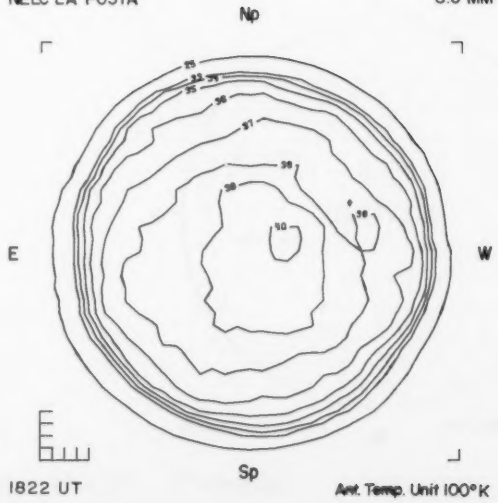


1730 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM

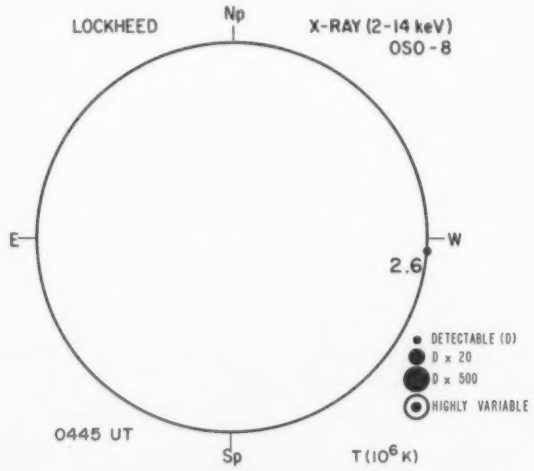


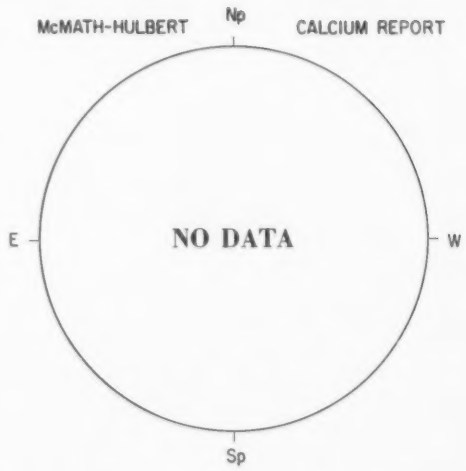
1822 UT

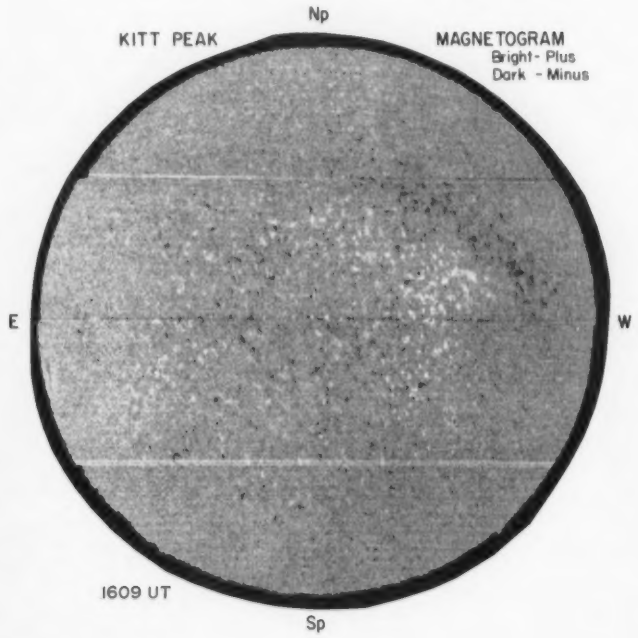
Ant. Temp. Unit 100°K

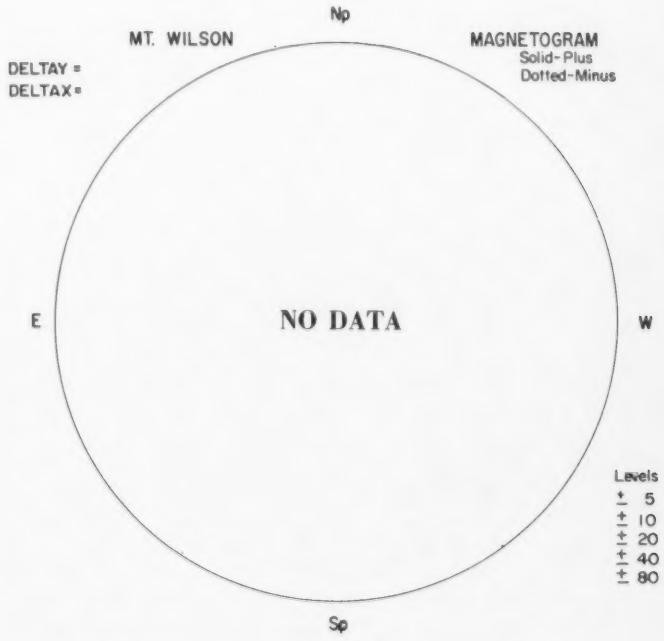
77 Nov 75

NOVEMBER 27, 1975 (P =17.83, B_0 =1.42, L_0 =249.75)









27

RAMEY AFB

Np

Hα

E

W

1238 UT

Sp

BOULDER

Np

SUNSPOTS

E

NO SPOTS VISIBLE

W

1545 UT

Sp

CORONA

NO DATA

NELC LA POSTA

Np

2.0 CM

NO DATA

E

WEATHER

W

---- UT

Sp

Ant. Temp. Unit 100°K

NELC LA POSTA

Np

8.6 MM

NO DATA

E

WEATHER

W

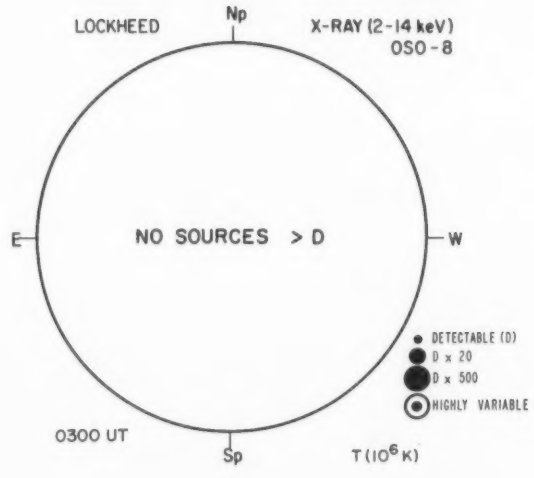
---- UT

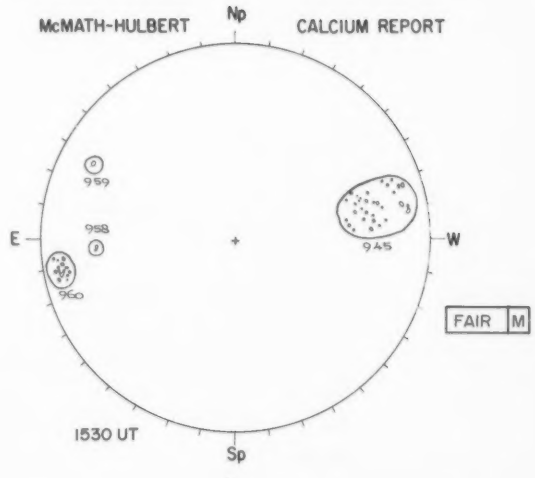
Sp

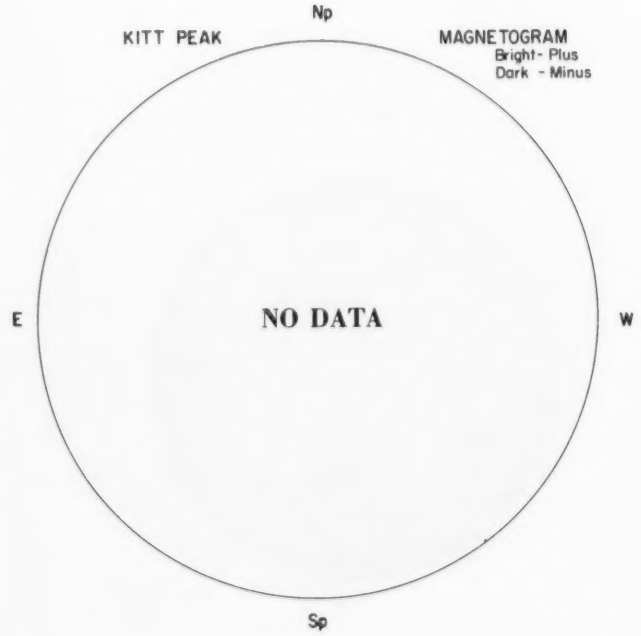
Ant. Temp. Unit 100°K

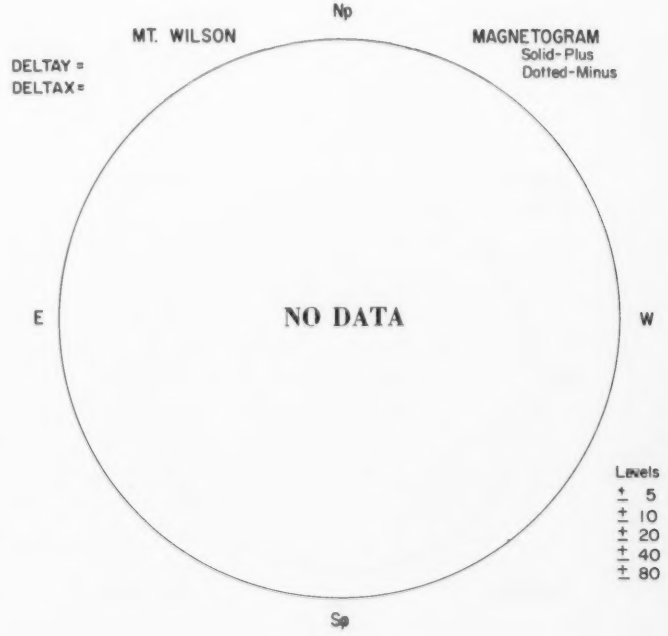
79 Nov 75

NOVEMBER 28, 1975 (P =17.47, B_0 =1.29, L_0 =236.57)



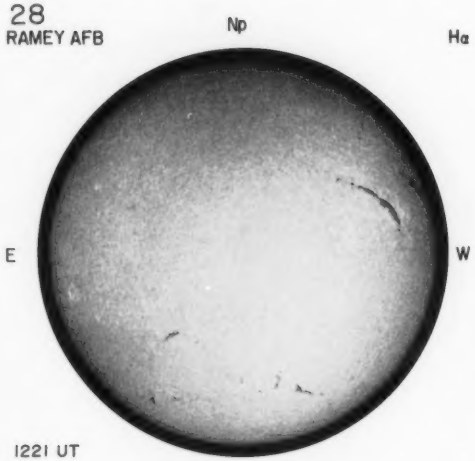




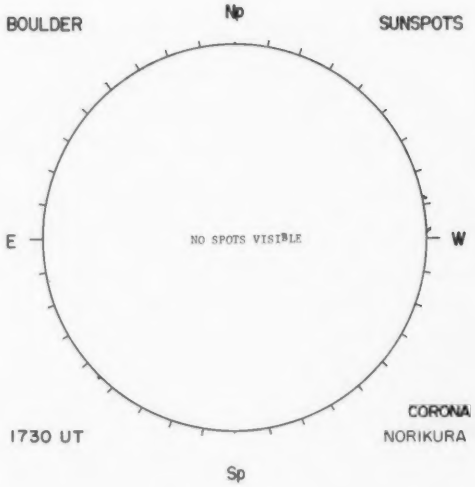


28

RAMEY AFB



BOULDER

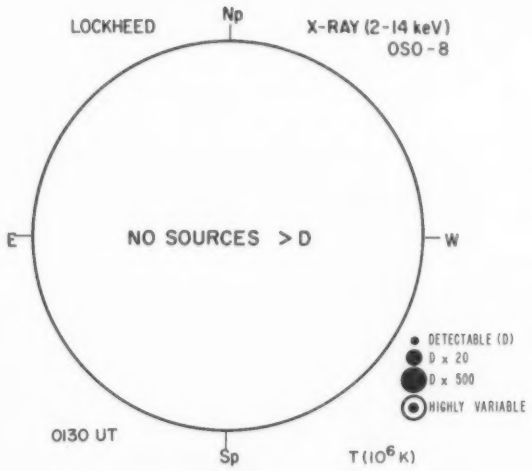


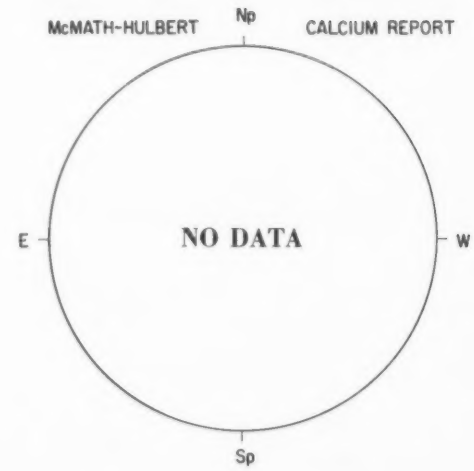
NELC LA POSTA

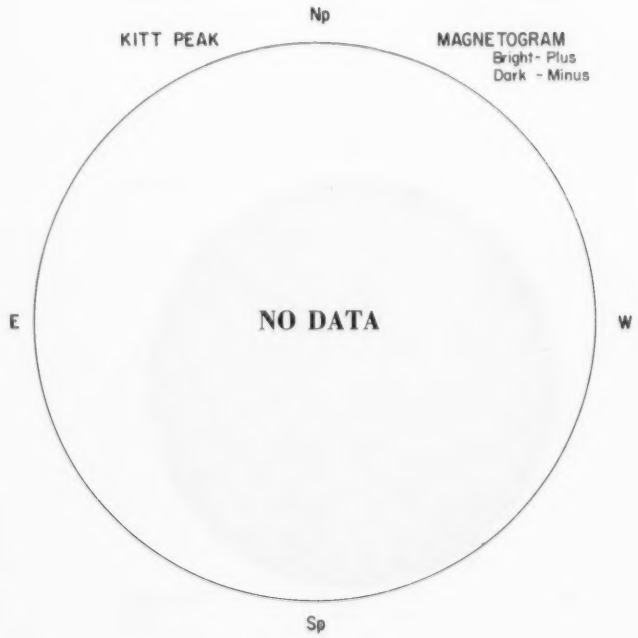
NELC LA POSTA

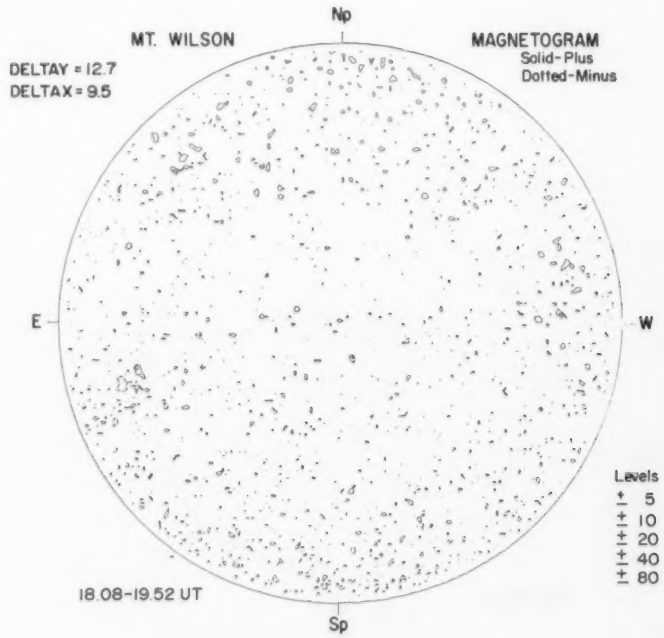
81
Nov 75

NOVEMBER 29, 1975 (P = 17.11, B_0 = 1.17, L_0 = 223.39)



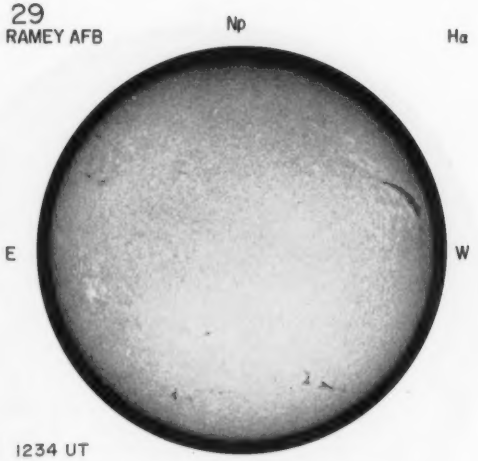




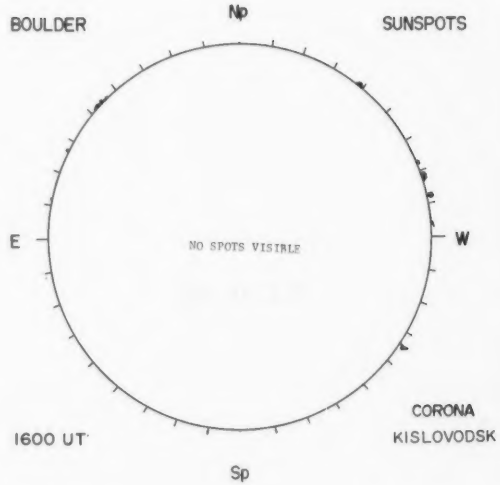


29

RAMEY AFB



BOULDER



NELC LA POSTA

Np

2.0 CM

NO DATA

E

EQUIPMENT

W

---- UT

Sp

Ant. Temp. Unit 100°K

NELC LA POSTA

Np

8.6 MM

NO DATA

E

EQUIPMENT

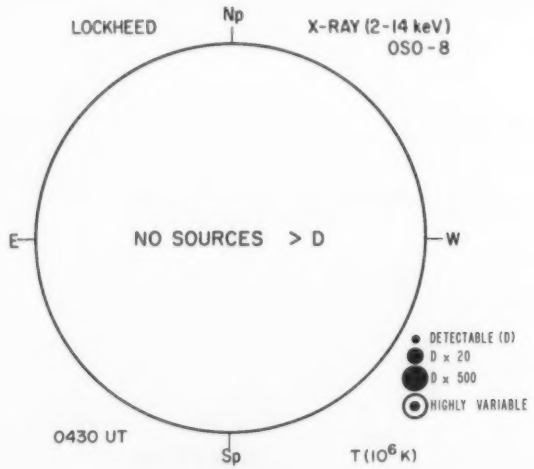
W

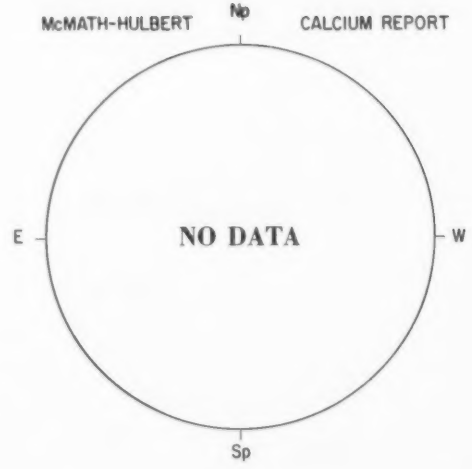
---- UT

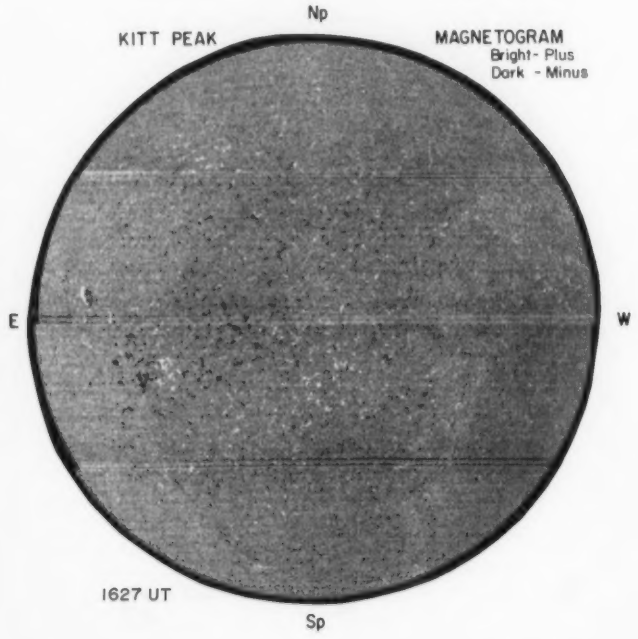
Sp

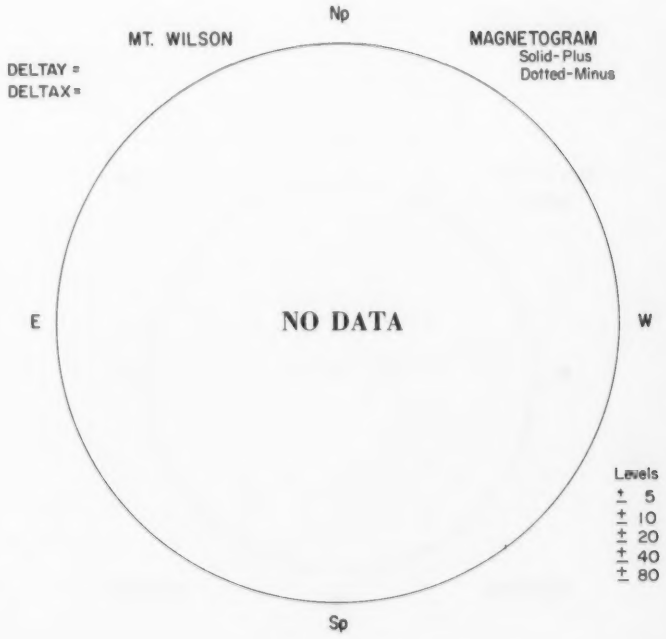
Ant. Temp. Unit 100°K

NOVEMBER 30, 1975 (P = 16.73, B_o = 1.04, L_o = 210.22)

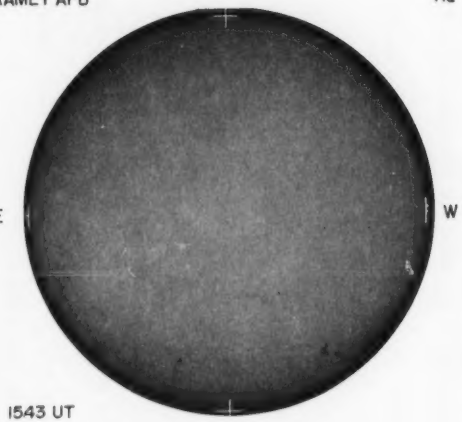






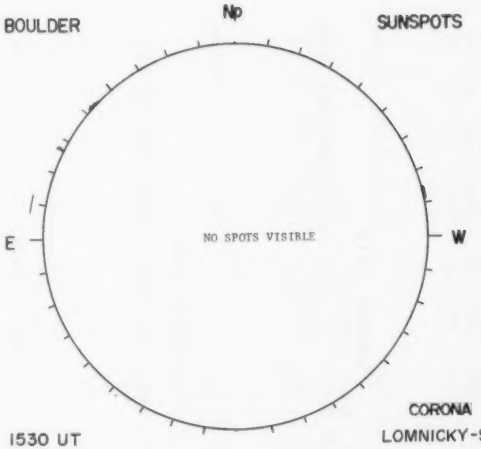


30
RAMEY AFB



1543 UT

BOULDER



1530 UT

CORONA
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NELC LA POSTA

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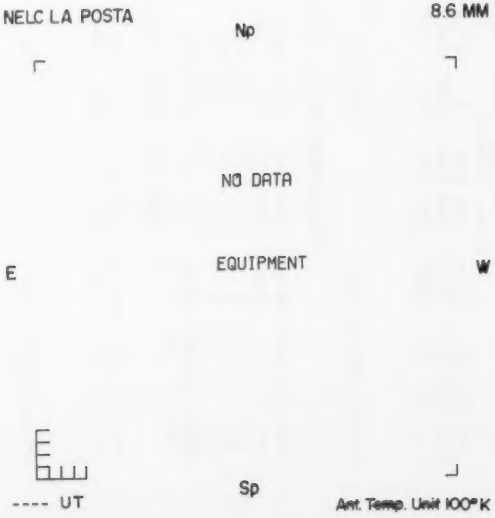

REGIONS OF SOLAR ACTIVITY

NOVEMBER 1975

MCMATH REGION 13919 CMP DATE 2.4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	2	13919	S30 W04	213	100	1.5									

MCMATH REGION 13913 CMP DATE 2.6

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	10	27	13913	N28 E80	210	300	1.0									
75	10	28	13913	N28 E67	210	200	1.0									

MCMATH REGION 13925 CMP DATE 3.2

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	4	13925	S05 W19	203	100	1.5									

MCMATH REGION 13920 CMP DATE 3.5

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	2	13920	S28 E10	199	300	1.0									

MCMATH REGION 13924 CMP DATE 4.5

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	4	13924	N04 W02	186	200	2.0	19637	N04 W05	189	(BF)	2	B	10	1	AXX
75	11	5	13924	N04 W16	187	200	2.0	19637	N04 W16	187	(AF)	1	B	0	1	AXX
75	11	6	13924	N04 W29	198	100	1.5									
75	11	7	13924	N04 W47	168	100	1.0									

MCMATH REGION 13914 CMP DATE 4.6 RETURN OF REGION 13875 ROTATION 2

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	10	29	13914	N35 E80	184	300	1.5									
75	10	30	13914	N34 E65	186	300	2.5									
75	10	31	13914	N34 E53	184	300	2.0									
75	11	2	13914	N34 E25	184	400	2.0									
75	11	4	13914	N34 E00	184	200	2.0									
75	11	5	13914	N34 W12	183	200	2.0									
75	11	6	13914	N34 W24	183	200	1.5									
75	11	7	13914	N34 W42	183	100	1.5									
75	11	8	13914	N34 W51	183	200	1.5									
75	11	9	13914	N34 W65	180	200	1.0									
75	11	10	13914	N34 W79	183	200	1.0									

MCMATH REGION 13928 CMP DATE 4.8

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	7	13928	S08 W40	181	100	1.0									
75	11	8	13928	S08 W50	182	100	1.5									

MCMATH REGION 13916 CMP DATE 6.4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	2	13916	N02 E49	160	300	2.0									

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MCMATH REGION 13935 CMP DATE 6.4

CALCIUM PLAGE DATA								SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	11	13935	S11 W68	161	500	2.5									
75	11	12	13935	S11 W82	161	700	2.5									

MCMATH REGION 13921 CMP DATE 6.6

CALCIUM PLAGE DATA								SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	2	13921	S20 E52	157	200	1.0									

MCMATH REGION 13922 CMP DATE 6.9

CALCIUM PLAGE DATA								SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	2	13922	S02 E62	147	200	2.0									
75	11	3						19636	S04 E42	151	(BF)	3	B	10	3	BXO
75	11	4	13922	S03 E34	150	500	3.5	19636	S05 E31	153	(BP)	4	B	30	11	BXI
75	11	5	13922	S03 E19	152	700	2.5	19636	S05 E16	155	(BP)	4	B	40	17	CAO
75	11	6	13922	S03 E05	154	800	2.5	19636	S05 E03	154	(BP)	4	B	50	17	DAI
75	11	7	13922	S04 W12	153	700	2.5	19636	S05 W11	154	(BP)	3	B	30	3	BXO
75	11	8	13922	S04 W23	155	800	2.5	19636	S05 W25	155	(BP	2				
75	11	9	13922	S04 W39	154	600	2.5									
75	11	10	13922	S04 W52	156	500	2.5									
75	11	11	13922	S04 W64	157	600	2.0									
75	11	12	13922	S05 W77	156	600	2.0									

MCMATH PEGION 13931 CMP DATE 7.1

CALCIUM PLAGE DATA								SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	8	13931	S41 W20	152	100	1.0									

MCMATH REGION 13923 CMP DATE 7.9 RETURN OF REGION 13887* ROTATION 2

CALCIUM PLAGE DATA								SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	2	13923	S10 E68	141	200	1.0									

MCMATH REGION 13927 CMP DATE 9.6

CALCIUM PLAGE DATA								SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	4	13927	S08 E69	115	100	1.0									
75	11	5	13927	S08 E54	117	200	2.5									
75	11	6	13927	S08 E40	119	300	2.5	19639	S08 E37	120			B	10	2	BXO
75	11	7	13927	S08 E23	118	400	2.5	19639	S08 E24	119	(BP)	2	B	10	1	AXX
75	11	8	13927	S08 E13	119	400	2.0	19639	S08 E08	122	(AP)	1				
75	11	9	13927	S08 W05	120	300	2.5									
75	11	10	13927	S08 W17	121	300	2.5									
75	11	11	13927	S08 W28	121	300	2.0									
75	11	12	13927	S08 W41	120	300	2.0									
75	11	13	13927	S09 W55	120	300	1.0									
75	11	14	13927	S09 W70	120	100	1.0									

MCMATH REGION 13926 CMP DATE 10.9 RETURN OF REGION 13890 ROTATION 2

CALCIUM PLAGE DATA								SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	4	13926	N06 E87	97	1400	3.5	19638	N03 E80	104	(AP)	3	B	80	1	HSX

(Cont'd)

*An asterisk beside the "Return of Region" number indicates that the new region is only part of the area of the old region.

REGIONS OF SOLAR ACTIVITY

NOVEMBER 1975

(Cont'd)

75	11	5	13926	N06 E73	98	2800	4.0	19638	N03 E67	104	(AP)	4	8	30	3	CSO
75	11	6	13926	N06 E57	102	3200	3.5	19638	N03 E52	105	(BP)	4	8	90	6	HAX
75	11	7	13926	N06 E40	101	2500	3.0	19638	N03 E41	102	(BP)	4	8	90	5	CSO
75	11	8	13926	N06 E31	101	2500	3.0	19638	N03 E27	103	(BP)	4				
75	11	9	13926	N06 E15	100	2200	3.0	19638	N03 E15	103	(BP)	4	8	80	27	CSO
75	11	10	13926	N06 E02	102	2300	3.0	19638	N03 W02	105	(AP)	5	8	60	11	CAI
75	11	11	13926	N06 W10	103	2500	3.0	19638	N03 W14	105	(BP)	4	8	50	6	CSO
75	11	12	13926	N06 W23	102	2500	2.5	19638	N03 W27	104	(BY)	4	8	40	6	CAI
75	11	13	13926	N06 W37	102	2100	2.5	19638	N03 W41	104	(BP	4	8	20	7	BXI
75	11	14	13926	N06 W54	104	2000	2.5	19638	N03 W54	105	(AP)	2	8	20	1	AXX
75	11	15	13926	N06 W64	104	1800	2.0									
75	11	16	13926	N06 W77	103	1600	2.5									
75	11	17	13926	N07 W88	101	600	1.0									

MCMATH REGION 13940 CMP DATE 11.9

			CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	15	13940	S05 W49	89	100	1.5									
75	11	16	13940	S05 W64	90	100	1.5									

MCMATH REGION 13932 CMP DATE 12.1

			CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	9	13932	S19 E30	85	100	2.0									
75	11	10	13932	S19 E18	86	100	1.0									

MCMATH REGION 13929 CMP DATE 12.4

			CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	7	13929	N08 E60	81	100	1.5									
75	11	8	13929	N09 E50	82	100	1.5									

MCMATH REGION 13930 CMP DATE 13.0 RETURN OF REGION 13892* ROTATION 4

			CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	7	13930	S11 E70	71	500	1.5									
75	11	8	13930	S13 E56	76	500	2.0									
75	11	9	13930	S12 E43	72	500	2.0									
75	11	10	13930	S12 E31	73	300	2.0									
75	11	11	13930	S11 E19	74	500	2.0									
75	11	12	13930	S11 E06	73	500	2.0									
75	11	13	13930	S11 W08	73	400	2.0									
75	11	14	13930	S11 W24	74	400	2.0									
75	11	15	13930	S11 W34	74	400	1.5									
75	11	16	13930	S11 W48	74	300	1.5									
75	11	17	13930	S11 W61	74	300	1.5									
75	11	18	13930	S13 W74	74	300	1.0									

MCMATH REGION 13936 CMP DATE 13.5

			CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	11	13936	S13 E26	67	300	2.0	19640	S15 E24	67						
75	11	12	13936	S13 E13	66	300	2.0									
75	11	13	13936	S14 W01	66	100	1.0									
75	11	14	13936	S14 W17	67	100	1.5									
75	11	15	13936	S14 W27	67	100	1.5									
75	11	16	13936	S13 W41	67	100	1.5									
75	11	17	13936	S14 W54	67	100	1.0									
75	11	18	13936	S14 W67	67	100	1.0									

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MCMATH REGION 13933 CMP DATE 14.1 RETURN OF REGION 13892* ROTATION 4

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	8	13933	S13 E68	64	400	1.5									
75	11	9	13933	S13 E54	61	300	1.5									
75	11	10	13933	S13 E43	61	400	1.5									
75	11	11	13933	S13 E32	61	500	2.0									
75	11	12	13933	S13 E20	59	300	2.0									
75	11	13	13933	S13 E07	58	300	2.0									
75	11	14	13933	S14 W09	59	300	2.0									
75	11	15	13933	S14 W20	60	300	1.5									
75	11	16	13933	S14 W33	59	300	1.5									
75	11	17	13933	S14 W46	59	400	1.5									
75	11	18	13933	S14 W58	58	300	1.0									
75	11	19	13933	S14 W73	61	200	1.0									

MCMATH REGION 13941 CMP DATE 15.2

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	15	13941	S03 W05	45	100	1.5									
75	11	16	13941	S03 W19	45	100	1.0									
75	11	17	13941	S03 W33	46	100	1.0									

MCMATH REGION 13942 CMP DATE 15.3

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	16	13942	S11 W18	44	100	1.5									
75	11	17	13942	S11 W31	44	100	1.0									

MCMATH REGION 13939 CMP DATE 16.1

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	14	13939	S38 E18	32	200	1.5									

MCMATH REGION 13934 CMP DATE 16.2

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	10	13934	N06 E78	26	300	2.0									
75	11	11	13934	N07 E66	27	300	1.5									
75	11	12	13934	N08 E52	27	500	3.5	19641	N06 E47	30	(BP)	3	B	10	3	BXO
75	11	13	13934	N08 E36	29	500	3.0	19641	N06 E32	31	(BF)	3	B	30	5	CAI
75	11	14	13934	N08 E20	30	800	3.0	19641	N06 E18	33	(BF)	4	B	120	8	DAI
75	11	15	13934	N08 E09	31	900	3.0	19641	N06 E05	34	(BP)	4	B	80	9	BXI
75	11	16	13934	N07 W06	32	1100	3.0	19641	N06 W08	33	(BP)	3	B	30	8	CSI
75	11	17	13934	N07 W19	32	1000	3.0	19641	N06 W22	34	(BP)	3	B	20	14	BXO
75	11	18	13934	N07 W33	33	1000	3.0	19641	N06 W34	33	(B)	3	R	70	10	DSI
75	11	19	13934	N07 W47	35	1000	3.0	19641	N06 W47	34	(BP)	4	H	120	8	CAI
75	11	20	13934	N07 W60	34	1000	3.0	19641	N06 W62	36	(BP)	3	B	150	8	DAO
75	11	21	13934	N07 W74	36	1000	3.0	19641	N11 W75	36	(BP	2	B	120	1	HSX
75	11	22	13934	N07 W87	34	900	1.5									

MCMATH REGION 13943 CMP DATE 18.2

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	11	16	13943	N11 E22	4	100	1.5									
75	11	17	13943	N11 E08	5	100	1.5									

REGIONS OF SOLAR ACTIVITY

NOVEMBER 1975

MCMATH REGION 13937 CMP DATE 19.9

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
75	11	13	13937	S07 E87	339	800	2.0
75	11	14	13937	S07 E72	339	1500	3.5
75	11	15	13937	S07 E60	341	2000	3.5
75	11	16	13937	S07 E45	342	2000	3.5
75	11	17	13937	S07 E31	343	2000	3.5
75	11	18	13937	S07 E17	344	2300	3.5
75	11	19	13937	S07 E04	344	2300	3.5
75	11	20	13937	S07 W08	342	2300	3.0
75	11	21	13937	S07 W22	344	2200	3.0
75	11	22	13937	S07 W35	342	2500	3.0
75	11	23	13937	S07 W47	342	2200	3.0
75	11	24	13937	S07 W61	343	2300	3.0
75	11	25					

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
19642	S07 E81	343	(A)	3				
19642	S08 E68	344	(A)	4	B	60	3	DAO
19642	S07 E55	345	(D)	4	B	140	4	HAO
19642	S08 E42	344	(Y)	5	B	260	28	DAC
19642	S08 E28	345	(D)	5	B	420	30	DKI
19642	S08 E14	346	(D)	4	R	320	23	DKI
19642	S08 E02	345	(BY)	5	H	570	22	DKI
19642	S07 W12	346	(BF)	4	B	270	14	DKI
19642	S08 W25	346	(BF)	5	B	240	13	DKI
19642	S07 W38	345	(BY)	5	B	400	15	CKI
19642	S07 W48	342	(AF)	3	B	230	4	HSX
19642	S07 W64	344	(AF)	4	B	220	2	HSX
19642	S07 W77	343	AF		R	110	1	HSX

MCMATH REGION 13938 CMP DATE 19.9 RETURN OF REGION 13905 ROTATION 2

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
75	11	13	13938	S17 E78	348	400	1.5
75	11	14	13938	S17 E65	346	500	1.5
75	11	15	13938	S16 E55	346	600	1.5
75	11	16	13938	S17 E42	345	700	1.5
75	11	17	13938	S17 E29	345	700	1.5
75	11	18	13938	S17 E16	345	600	1.5
75	11	19	13938	S16 E04	344	500	1.5
75	11	20	13938	S17 W09	343	500	2.0
75	11	21	13938	S17 W22	344	500	1.5
75	11	22	13938	S17 W35	342	500	1.5
75	11	23	13938	S19 W47	342	500	1.5
75	11	24	13938	S18 W61	343	500	1.5

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 13952 CMP DATE 20.0

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
75	11	23	13952	S46 W47	342	200	1.5
75	11	24	13952	S47 W58	340	100	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 13953 CMP DATE 21.0

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
75	11	24	13953	N11 W48	330	100	1.5

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 13944 CMP DATE 22.7

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
75	11	18	13944	N27 E55	306	100	1.5
75	11	19	13944	N27 E41	307	200	2.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 13954 CMP DATE 23.3

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
75	11	24	13954	N25 W17	299	100	1.5

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

REGIONS OF SOLAR ACTIVITY

NOVEMBER 1975

MCMATH REGION 13945 CMP DATE 24.6 RETURN OF REGION 13906 ROTATION 5

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
75	11	19	13945	N10 E60	288	700	1.0							
75	11	20	13945	N11 E49	285	700	1.0							
75	11	21	13945	N11 E38	284	800	1.0							
75	11	22	13945	N10 E25	282	1000	1.5							
75	11	23	13945	N10 E13	282	800	1.0							
75	11	24	13945	N11 E06	276	1200	1.5							
75	11	25	13945	N10 W46	274	1400	1.5							

MCMATH REGION 13955 CMP DATE 25.3

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
75	11	24	13955	N33 E09	273	100	1.5							

MCMATH REGION 13949 CMP DATE 25.6

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
75	11	22	13949	S39 E40	267	100	2.0							

MCMATH REGION 13950 CMP DATE 26.9

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
75	11	22	13950	N24 E56	251	200	1.0							

MCMATH REGION 13956 CMP DATE 29.1

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
75	11	24	13956	S12 E60	222	200	1.5							

MCMATH REGION 13962 CMP DATE 29.6

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
75	12	01	13962	S07 W28		100	1.0							

MCMATH REGION 13961 CMP DATE 29.7

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
75	12	01	13961	S03 W26		100	1.0							

MCMATH REGION 13968 CMP DATE 30.1

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
75	12	04	13968	N20 W59		100	1.0							

REGIONS OF SOLAR ACTIVITY

NOVEMBER 1975

MCMATH REGION 13963 CMP DATE 30.7

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
75	12	01	13963	S09 W13		200	1.5	19644	S10 W14		BP				
75	12	02	13963	S09 W29		200	1.5								
75	12	03	13963	S09 W39		100	1.0								
75	12	04	13963	S10 W53		200	1.0								

No calcium spectroheliograms were obtained at the McMath-Hulbert Observatory on Nov. 1, 3, 25, 26, 27, 29 and 30, 1975.
No sunspot observations were made at Mt. Wilson Observatory on November 27 and 28, 1975.

DAILY CALCIUM PLAGE INDEX

NOVEMBER 1975

YR	MO	DAY	INDEX	YR	MO	DAY	INDEX	YR	MO	DAY	INDEX
75	11	1	*	75	11	11	11.2	75	11	21	8.1
75	11	2	3.5	75	11	12	9.7	75	11	22	8.2
75	11	3	*	75	11	13	7.0	75	11	23	5.7
75	11	4	2.4	75	11	14	8.5	75	11	24	5.8
75	11	5	5.6	75	11	15	9.2	75	11	25	*
75	11	6	8.7	75	11	16	10.8	75	11	26	*
75	11	7	8.8	75	11	17	10.6	75	11	27	*
75	11	8	10.1	75	11	18	11.3	75	11	28	2.2
75	11	9	9.4	75	11	19	11.3	75	11	29	*
75	11	10	9.5	75	11	20	9.6	75	11	30	*

* NO OBSERVATIONS

SUDDEN IONOSPHERIC DISTURBANCES

NOVEMBER 1975

DAY	UNIVERSAL TIME START	END	MAX	IMP	WIDE SPREAD INDEX	NUMBER OF STATION REPORTS BY TYPE SWF	SCNA	SEA	SPA	LF-SPA	SES	SFD	KNOWN FLARE	McMATH REGION
05	1457	1506	1500	1-	1	1							1458	13925
05	1850	2024	1904	1-	5					1	10		1844	13926
06	0118	0143	0123	1-	3	1			2				0115	13926
06	0848	0919	0854	1-	1			1					0850	13926
06	0923	0940	0926	1-	3	1		1	2				0922E	13926
14	0410	0445	0415	1-	3	1			2				0409	13937
14	0808	0829	0817	1-	3			2					0807E	13934
15	1143	1220	1149	1	3	1			2				1145	13937
15	2309	2334	2312	1-	1				1				2308	13937
16	0208	0302	0217	1-	1				1				0202	13937
16	0540	0704	0556	1	3	1			2				0537	13937
16	1118	1130	1120	2	3				2		1		1112	13937
16	1445	1537	1502	1	5		1		1		9		1450	13937
16	2015	2032	2018	1-	5						7		2014E	13937
17	1149	1300	1208	1	5	1		2	1		3		1145E	13937
19	1344	1440	1401U	1-	1			1					1344	13934
21	0615	0822	0633	1+	3	1			1				0610	13937

PERIODS OF NO OBSERVATIONS:

DATE	TIME (UT) and STATION
01	0000-2400 A28, 1128-1135 UM (10 kHz), 1902-1935 UM (10 kHz), 1942-1947 UM (10 kHz), 2000-2106 UM (10 kHz)
02	0000-2400 A28, 1120-1302 UM (10 kHz), 1909-2033 UM (10 kHz)
03	0230-0345 UM (10 kHz), 0533-0615 UM (10 kHz), 1325-1418 TM
04	0000-2400 TN, 1850-1900 TM, 1925-2105 UM (10 kHz)
05	1925-2105 UM (10 kHz), 2153-2220 UM (10 kHz)
06	2256-2306 TM
07	0000-2400 A1, 0140-0240 UM (10 kHz), 1226-1248 TM, 2050-2107 TM, 2310-2400 UM (10 kHz)
08	0000-0037 UM (10 kHz), 0137-0219 UM (10 kHz)
09	0300-0330 UM (10 kHz), 0355-0437 UM (10 kHz), 0620-0741 UM (10 kHz), 0845-0950 UM (10 kHz), 2229-2322 TM
10	0535-0635 UM (10 kHz), 0709-0715 UM (10 kHz), 1400-1745 UM (17 kHz)
11	0330-0347 UM (10 kHz), 0425-0610 UM (10 kHz), 0628-0717 TM, 1930-1945 TM, 2121-2142 TM
12	0400-0610 UM (10 kHz), 0650-0845 UM (10 kHz), 1853-2029 TM
13	0400-0408 UM (10 kHz), 2118-2203 TM
14	0000-0452 TM
15	0935-0947 UM (10 kHz), 1108-1300 TM, 2218-2318 TM
16	0557-0807 UM (10 kHz)
17	0415-0708 UM (10 kHz), 0817-0900 UM (10 kHz), 1400-1752 UM (17 kHz), 1518-1540 UM (10 kHz), 1905-1931 UM (10 kHz), 2242-2400 TM
18	0000-1253 TM
19	0000-2400 A4, 0530-0900 UM (10 kHz), 0911-1108 TM, 2108-2200 UM (17 kHz)
20	0453-0533 UM (10 kHz), 0744-0930 TM
21	0330-0830 UM (10 kHz), 1354-1412 TM
22	0333-0438 UM (10 kHz)
23	0415-0615 UM (10 kHz)
24	0850-0900 UM (10 kHz), 1338-1402 TM, 1400-1740 UM (17 kHz)
25	0330-0900 UM (10 kHz), 1537-1620 UM (10 kHz), 1750-1808 UM (10 kHz)
26	0245-0521 UM (10 kHz), 0719-1232 TM
27	0240-0425 UM (10 kHz), 0553-0615 UM (10 kHz) 0700-1740 TM, 0740-0840 UM (10 kHz)
28	0315-0522 UM (10 kHz), 0739-1006 TM
29	0247-0353 UM (10 kHz), 1038-1045 UM (10 kHz)
30	0238-0330 UM (10 kHz)

STATIONS REPORTING FOR NOVEMBER 1975

AAVSO (A1, A4, A19, A21, A28, A29, A31, A32, A33, A34, A35, A36, A37, A40) (SES)
(A1, A26, A31) (SEA) (A31) (SWF)
AREQUIPA (AQ) (SPA)
DARMSTADT (DA) (SWF)
DEBRE ZEIT (DE) (SPA)
HERMANUS (HS) (SEA)
HERSTMONCEUX (HC) (SEA)
HIRAISO (HI) (SWF)
HOBART (TA) (SEA)
INUBO (IN) (SPA)
KUHLUNGSBORN (KU) (SEA, SPA)
MANILA (MA) (SWF, SPA)
MCMATH (MC) (SFW, SCNA)
NEUSTRELITZ (NU) (SWF)
PANSKA VES (PU) (SWF, SEA, SES)
POITIERS (PO) (SEA)
PRESTON (LO) (SEA)
SAO PAULO (UM) (SES, SPA)
SOFIA (SF) (SES)
ST CLOUD (SC) (SES)
TABLE MOUNTAIN (TM) (SPA, LF-SPA)
TORINO (TN) (SPA)
UPICE (UI) (SEA)

SID's BY McMATH REGION

NOVEMBER 1975

DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
REGION																														
26					2	3																								
34														1					1											
37														1	2	5	1				1									
X-RAY																														
UNKNOWN																														
NO FP																														

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

NOVEMBER 1975

NOV 1975	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
01	0000	0921	MANI										
	0000	0715	CULG				0037.5	0038.5	1	0037.5	0038.5	1	IIIG
	0633	1545	DURN	0844.1	0844.2	2							III
	1121	2133	SGMR										
	1330	2400	BOUL										
	1330	2345	HARV										
	2015	2400	CULG										
	2151	2346	MANI										
02	0000	0715	CULG										
	0052	0920	MANI										
	0634	1419	DURN										
	1123	2131	SGMR										
	1330	2400	BOUL										
	1331	2345	HARV										
	1524	1558	DURN										
	2151	2400	MANI										
	2039	2400	CULG				2355.5	2356.5					IIIG,W
03	0000	0919	MANI										
	0000	0711	CULG	0221.5	0223	1	0221.5	0223	1				IIIG,U
			CULG	0345	0346	1	0345	0346	1				IIIG
			CULG				0549	0552					IIIG,W
	0635	1540	DURN										
	1123	2130	SGMR										
	0658	1445	WEIS				1142.0	1143.0	2				IIIG
	1330	2400	BOUL										
	1331	2340	HARV										
	2144	2400	CULG										
	2151	2400	MANI										
04	0000	0919	MANI										
	0000	0716	CULG										
	0636	1540	DURN										
	0715	1457	WEIS										
	1124	2129	SGMR										
	1330	2400	BOUL										
	1331	2340	HARV										
	2015	2400	CULG				2015.5						IIIG,U,W
	2152	2400	MANI										
05	0000	0919	MANI										
	0000	0711	CULG										
	0637	1540	DURN										
	0716	1125	WEIS										
	1126	2127	SGMR										
	1130	1452	WEIS										
	1330	2400	BOUL				1425.6	1425.7	1				III
			BOUL				1615.7	1617.2	1	1615.7	1617.2		IIIG
	1345	2340	HARV				1616	1617	2	1617		2	IIIG
			HARV				1720	1721	2				IIIG
			BOUL				1826.8	1827.0	1				III
			HARV				1827		2				IIIG
	2015	2400	CULG	2130	2400								IS,W
			CULG	2143	2144		2143	2144					IIIG,W
			CULG				2145.5	2146.5					IIIG,W
	2153	2400	MANI										
06	0000	0919	MANI										
	0000	0711	CULG	0000	0711								IS,W
			CULG	0116	0118		0117.5	0118					IIIG,W
			CULG				0127	0128	1				II
			CULG				0134.5	0135	1				IIIG
			CULG				0241.5		1	0241.5		1	IIIB
			CULG	0626	0629	1	0626.5	0629	1				IIIGG
	0639	1540	DURN	0857.4	0858.1	2	0857.4	0858.1	1				IIIG,IC
			DURN	0919.0	0924.5	3	0920.5	0924.1	2				IIIGG,OCIM
	0720	1450	WEIS				0920.4	0921.3	2				IIIG
			WEIS				0922.0	0923.5	2				IIIG
	1127	2126	SGMR										

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

NOVEMBER 1975

NOV 1975	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
06			WEIS				1132.5	1133.0	1				IIIG
			DURN	1159.0	1210.5	2	1159.6	1210.5	2				IIIG,IDC
			WEIS				1159.5	1201.0	1				IIIG
			WEIS				1207.2	1207.4	2				IIIG
			WEIS				1209.7	1210.5	1				IIIG
	1330	2400	BOUL				1704.3	1705.0	2	1704.3	1705.0	2	III
	1345	2340	HARV				1704	1705	2	1704	1705	2	IIIG,V
			BOUL				1709.7	1711.0	1				III
			BOUL				1914.1	1914.2	1				III
			BOUL				1922.5	1922.6	1				III
	2015	2400	CULG	2018.5	2020.5	1	2018.5	2021	2	2019	2020.5	1	IIIG
			BOUL				2019.2	2020.1	2	2019.2	2020.1	2	IIIG
			HARV				2019	2020	3	2019	2020	3	IIIG
			BOUL				2114.5	2114.9	2	2114.5	2114.9	2	III
			HARV				2114	2115	3	2114	2115	3	IIIG,U,V
			CULG	2114	2116	1	2114	2116	2	2114	2115	1	IIIG
	2153	2400	MANI										
07	0000	0716	CULG				0015	0211	1				IIIN
			CULG	0018.5	0022	1	0018.5	0020.5	1				IIIG
	0000	0919	MANI							0020.3	0020.7	1	III
	0641	1535	DURN										
	0725	1454	WEIS										
	1128	2125	SGMR										
	1330	2400	BOUL										
	1346	2340	HARV										
	2016	2400	CULG										
	2153	2400	MANI										
08	0000	0919	MANI										
	0000	0716	CULG										
	0643	1535	DURN										
	0725	0837	WEIS										
	1130	2124	SGMR										
	1330	2400	BOUL										
	1346	2340	HARV										
	2016	2400	CULG										
	2153	2400	MANI										
09	0000	0918	MANI										
	0000	0716	CULG										
	0644	0850	DURN										
	1131	2123	SGMR										
	1330	2400	BOUL										
	1345	2340	HARV										
	2016	2400	CULG										
	2153	2400	MANI										
10	0000	0918	MANI										
	0000	0716	CULG	0059	0103	1	0102	0103	1				IIIGG
			CULG	0230	0235	1							IIIGG
			CULG	0240	0241.5	1							IIIG
			CULG	0445	0446.5	1							IIIG
			CULG				0713						IIIB,W
	0645	1530	DURN	0717.2	0717.9	2	0717.2	0717.3	2				IIIGG
			DURN	0722.3	0722.6	2							IIIG
			DURN	0726.0	0727.3	3	0726.0	0727.3	2				IIIGG,RS
			DURN	0741.3	0741.6	1	0741.3	0741.5	1				IIIG
			DURN	0742.5	0743.1	1							IIIG
			DURN	0745.1	0745.5	1							IIIG
			DURN	0746.6	0746.8	1	0746.6	0746.9	1				IIIG
			DURN	0834.0	0836.9	3							IIIG
			DURN	0840.0	0842.1	3	0841.5	0841.6					IIIGG,RS
			DURN	0913.5	0914.5	3	0913.5	0914.5	2				IIIG
			DURN	0916.5	0916.7	2							IIIG,RS
	0937	1442	WEIS				1129.3	1130.4	3				IIIGG
			DURN	1129.4	1130.6	3	1129.4	1130.6	2				IIIGG
	1132	2122	SGMR										
	1330	2400	BOUL										
	1345	2340	HARV										

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

NOVEMBER 1975

NOV 1975	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
10	2006	2400	CULG										
	2154	2400	MANI										
11	0000	0918	MANI										
	0000	0716	CULG				0240		1				IIIB
			CULG				0652	0652.5	1				IIIB
	0713	1535	DURN										
	0733	1405	WEIS										
	1133	2121	SGMR										
	1330	2400	BOUL										
	1345	2340	HARV										
	2016	2400	CULG										
	2154	2400	MANI										
12	0000	0918	MANI										
	0000	0714	CULG				0003.5	0005	1	0003.5	0005	1	IIIG
	0648	1535	DURN										
	0730	0945	WEIS										
	1055	1445	WEIS				1122.8	1123.0	1				IIIB
			WEIS				1204.8	1205.2	2				IIIB
	1330	2400	BOUL				1414.2	2331.0	2	1414.2	2331.0	2	IIIN
	1346	2340	HARV				1634	1635	1	1634	1635	1	IIIG
			HARV				1644		3	1644		3	IIIB
			HARV				1711		2	1711		2	U
	1135	2120	SGMR							1819.0	1819.4	1	III
			HARV				1819	1821	3	1819	1821	3	IIIG,V
			HARV				1830	1831	3	1830	1831	3	IIIB
			HARV				1905		2	1905		2	IIIB
			HARV				1914		2	1914		2	IIIB
	2016	2400	CULG				2059		1				IIIB
			CULG	2115.5	2116.5	1	2116	2121	1	2116.5	2121	1	IIIGG
			HARV				2117		3	2117		3	IIIB
			HARV				2121		2	2121		2	IIIB
			CULG				2157	2207.5	1	2157	2206	1	IIIGG,V
			HARV				2202	2205	1	2202	2205	1	IIIG
			CULG				2253		1				IIIB
			CULG				2328.5	2332	1	2328.5	2332	1	IIIG,V
	2155	2400	MANI							2331.6	2331.8	2	III
			CULG							2345.5		1	IIIB
13	0000	0716	CULG				0000	0716	1	0000	0716	1	IIIN
			CULG				0015	0020	1	0017	0019	1	IIIG
			CULG				0137	0138	1	0137	0138	1	IIIG
			CULG				0203.5	0206	1	0203.5	0206	1	IIIG
			CULG	0324	0327	1	0322	0328	1	0322	0328	1	IIIGG
	0000	0918	MANI							0331.2	0332.5	3	IIIG
			CULG				0351.5		1	0351.5		1	IIIB
			CULG	0430	0432	1	0430	0434	2	0430.5	0433.5	1	IIIGG
			CULG				0524.5	0526.5	1				IIIG
			MANI							0527.3	0528.2	2	IIIG
			MANI							0618.7	0621.0	3	CONT
			CULG	0618	0621	1	0618	0621	2	0618	0620.5	2	IIIG,V
	0730	0758	WEIS										
	0802	1136	WEIS										
	1136	2119	SGMR										
	1143	1446	WEIS										
	0651	1535	DURN	1306.3	1306.5	2							IIIG
			DURN	1311.5	1311.6	2							III
	1330	2400	BOUL										
	1345	2340	HARV										
	2016	2400	CULG										
	2155	2400	MANI										
14	0000	0716	CULG				0112	0125					IIIN,W
			CULG	0405	0412	1	0404.5	0411	2	0405	0411	2	IIIGG,V,U
	0000	0918	MANI							0406.1	0411.0	3	CONT
	0000	0918	MANI							0406.3	0410.1	3	IIIG
			CULG				0412	0427	2				IIH
			MANI							0413.0	0418.5	3	CONT
			CULG	0417	0417.5								IIIG,W

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NOV 1975	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
14			CULG	0450	0452	1	0450	0452	2	0450.5	0452	1	IIIG,V
			MANI							0451.8	0453.5	3	IIIG
			CULG				0539	0540	1				IIIG
	0654	1535	DURN	0818.3	0820.5	1							III,DCIM
	1137	2118	SGMR										
	0725	1444	WEIS				1255.3	1257.6	2				IIIG
			WEIS				1343.6	1344.0	3				IIIG
			WEIS				1411.7	1412.6	2				IIIG
			DURN	1411.7	1411.9	2	1411.7	1411.9	2				IIIG,U
	1330	2400	BOUL				1412.0	1412.8	1	1412.0	1412.8	1	IIIG
			DURN	1412.3	1412.4	2							III
			BOUL							1526.8	1527.0	1	III
			BOUL				1532.5	1533.1	1	1532.5	1533.1	1	III
	1345	2340	HARV				1532	1533	1	1532	1533	1	IIIG
			BOUL				1547.3	1547.6	1	1547.3	1547.6	1	III
			BOUL				1549.0	1550.4	2	1549.0	1550.4	2	IIIG
			HARV				1549	1550	2	1549	1550	2	IIIG
			BOUL				1718.3	1718.6	1	1718.3	1718.6	1	IIIG
			HARV				1718		2	1718		2	IIIB
			BOUL				1720.2	1721.0	1	1720.2	1721.0	1	IIIG
			BOUL				1745	1840	1				IS
			BOUL				1758.4	1759.3	1	1758.4	1759.3	1	IIIG
	2016	2400	CULG										
	2155	2400	MANI										
15	0000	0917	MANI										
	0000	0717	CULG				0552.5	0553	1				IIIG
			CULG				0556	0557	1	0556	0556.5	1	IIIG
			CULG				0654.5						IIIB,W
	0656	0742	DURN										
	0749	1530	DURN	1030.2	1030.3	1							III,RS
			DURN	1114.6	1114.7	2							IIIG,RS
	1139	2117	SGMR										
	0724	1210	WEIS				1141.0	1147.0	2				IIIGG
			DURN	1141.1	1147.0	3	1141.1	1147.0	3				IIIGG,RS,D
			WEIS				1143.5	1145.5	2				IIIGG
			WEIS				1149.5	1154.2	3			II	
			DURN	1149.5	1151.5	3							DCIM
			DURN	1158.8	1203.8	3	1159.4	1203.8	3				IIIG,DCIM
			WEIS				1159.4	1159.6	3				IIIB
			DURN	1207.8	1209.6	3	1208.0	1209.6	3				IIIG,DCIM
			WEIS				1208.0	1209.5	2				IIIGG,RS
			DURN	1212.3	1215.3	3	1213.8	1214.5	1				IIIG,DCIM
			DURN	1216.4	1218.6	3	1218.5	1218.6	3				IIIG,N,RS
			DURN	1224.3	1224.5	1							IIIG,RS
			DURN	1226.6	1226.6	2							III
			DURN	1232.3	1232.5	2							IIIG
	1330	2400	BOUL				1348	1530	2	1348	1530	2	IV
			DURN	1432.3	1432.6	2							IIIG
			BOUL				1432.7	1435.1	2	1432.7	1435.1	2	III
			DURN				1433.2	1433.3	3				I
			BOUL							1530	1928	1	CONT
			BOUL				1530	1918	1				IS
			BOUL				1918	2328	3	1928	2328	3	IV
	1345	2340	HARV				1951	2215	1	2024	2106	1	I
	2016	2400	CULG				2016	2400	1				IIIN
			CULG	2016	2400	1	2016	2400	2				IS,CONT,DC
			HARV				2113	2200	1	2113	2200	1	IIIN
			CULG				2147	2147.5	2	2147	2147.5	2	IIIG,V
			CULG							2150	2400		IIIN,W
	2156	2400	MANI										
16	0000	0717	CULG				0000	0717	1				IS,CONT,DC
			CULG	0000	0717	1							IN
			CULG	0114	0717	1	0000	0717	1	0213	0550	1	IIIN
			CULG	0114	0115.5	1							FASTDRIFT
			CULG	0242	0243	2	0242	0243	1	0242	0243	1	IIIG
			CULG				0452	0452.5	2	0452	0452.5	2	IIIG
	0000	0917	MANI							0533.7	0550.3	3	IIIG
			CULG	0534	0543	1	0534	0550	2	0534	0550	2	IIIGG,V

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NOV 1975	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
16			CULG	0534	0550	1							CONT
			CULG				0545	0553	1				II H
			CULG				0550	0717	2				CONT
	0000	0917	MANI							0616.8	0701.3	2	CONT
			CULG	0617	0625	1							IIIGG
			CULG	0626	0627	1							IIIG
			CULG	0630	0637	1							IIIGG
	0658	1532	DURN	0658 E	1532 D	3	0658 E	1532 D	3				IC,N
			DURN	0705.0	0708.2	3	0705.0	0708.2	3				IIIGG,DCIM
			CULG	0705	0708	2							IIIGG
			DURN	0740.9	0741.1	3	0740.9	0741.1	2				III
			DURN	0806.2	0806.3	2							IIIG
	1330	2400	BOUL				1348	1449.2	1	1348	1449.2	1	CONT
			BOUL				1355	1449.2	2				IS
			BOUL				1449.2	2000	3	1449.2	2000	3	IV
	1345	2340	HARV				1455	1456	2				IIIGG
			HARV				1507	1554	1				IN
	1140	2116	SGMR							1518.0	2116.0	1	CONT
			HARV				1529	1531	2	1530	1531	2	IIIGG
			HARV				1647	1702	1	1649	1702	1	I
			HARV				1702	1744	2	1702	1744	2	I
			HARV				1742	1827	1	1742	1827	1	IIIN
			HARV				1744	2014	1	1744	2014	1	I
			HARV				1839	1944	2	1829	1944	2	IIIN
			BOUL							2000	2319	1	CONT
			HARV				2015	2018	2	2015	2018	2	IIIGG
	2017	2400	CULG				2017	2400	1				IIIS
			CULG	2017	2400	1				2017	2047	1	IIIN
			CULG	2017	2400	1	2017	2400	1				IS,CONT,DC
			HARV				2027		2	2027		2	IIIG
			CULG				2146	2157	1	2155	2157	1	II
			BOUL							2147.3	2202.6	2	II
	2156	2400	MANI										
			CULG	2250.5	2251.5	2							IIIG
			CULG	2340.5	2341	2							IIIG
17	0000	0700	CULG	0000	0700	1	0000	0700	1				IS,CONT
			CULG	0000	0700		0000	0700					IIIN,W
	0000	0917	MANI										
	0659	1005	DURN	0659 E	1005 D	3	0659 E	1005 D	3				IC,N
			DURN	0753 E	1005 D	3	0753 E	1005 D	3				DCIM,N
	1141	2115	SGMR							1141.0	2115.0	3	CONT
	1330	2400	BOUL				1346	2328	3	1346	2328	3	IV
	1346	2340	HARV				1346	1640	1				I
			HARV				1640	1816	1				IN
			HARV				1648	1650	3	1648	1650	3	IIIGG,V
			HARV				1651	1654	1	1651	1654	1	IIIG
			HARV				1757	1800	1	1758	1800	1	IIIG
			HARV				1816	1940	2				I
			HARV				1823	1950	2				IIIS
			HARV				1940	2224	1				IN
			HARV				2000	2001	3	2000	2001	3	IIIG
			HARV				2017	2021	3	2017	2021	3	IIIGG
	2017	2400	CULG	2017	2400	1	2017	2400	2				IS,CONT
			CULG				2017	2400	1	2017	2400	1	IIIS
			CULG				2019	2020.5	3	2019	2020.5	2	IIIGG,V
			CULG				2055	2110	1	2055	2110	1	IIIGG
			HARV				2055	2103	2	2055	2103	2	IIIGG
			HARV				2105	2110	1	2105	2110	1	IIIGG
	2156	2400	MANI										
			CULG				2330	2400	1				SCIN
18			CULG				0000	0717	1	0000	0717	1	IIIS
	0000	0717	CULG	0000	0717	1	0000	0717	2				IS,CONT,DC
			CULG				0136.5	0137.5	2	0136.5	0137.5	2	IIIG
			CULG							0140.5		2	IIIB
			CULG				0404	0413	1				IIIGG
	0000	0917	MANI							0407.7	0411.2	2	IIIG
	0659	1528	DURN	0659 E	1528 D	3	0659 E	1528 D	3				IC,N
	1142	2114	SGMR							1142.0	2114.0	2	CONT

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NOV 1975	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
18	1345	2340	HARV				1345	1817	1				I
	1330	2400	BOUL				1352.2	2326	3	1352.2	2326	3	IV
			DURN	1354	1400	3							DCIM
			HARV				1634	2014	1	1634	2014	1	IIIN
			HARV				1817	1931	1				IN
			HARV				1931	2009	1				I
			HARV				2009	2021	2	2009	2021	2	I
	2017	2400	CULG	2017	2400	2	2017	2400	2				IS,CONT,DC
			CULG				2017	2400	2	2017	2035	2	IIIS
			HARV				2018	2154	2	2018	2154	2	IIIS
			HARV				2021	2124	3	2021	2124	3	I
			HARV				2033		3	2033		3	IIIG
			CULG							2035	2400	1	IIIS
			HARV				2124	2333	2	2124	2204	2	I
			HARV				2155	2231	1	2155	2231	1	IIIN
			CULG				2330	2340					SCIN
	2157	2400	MANI							2339.6	2346.4	2	IIIG
19	0000	0717	CULG	0000	0135	2	0000	0135	2				IS,CONT,DC
			CULG				0000	0717	2	0000	0717	1	IIIS
			CULG				0110	0140	1				SCIN
			CULG	0135	0717	1	0135	0717	1				IS,CONT,DC
			CULG				0329	0333	2	0330.5	0333	2	IIIGG
	0000	0917	MANI							0330.2	0333.5	3	CONT
			CULG				0422	0435	1				SCIN
			CULG				0430	0433	1				IIIG
9			MANI							0431.0	0437.8	2	IIIG
	0700	1528	DURN	0700 E	1528 D	3	0700 E	1528 D	3				IC,N
			MANI							0708.2	0708.6	3	III
			CULG				0708	0709	2	0708	0709	2	IIIG
			MANI							0720.9	0723.7	3	IIIG
			DURN	0723.2	0723.7	3	0723.2	0723.5	2				IIIG
			DURN				0802.8	0806.4	3				IIIGG
			DURN	0804.6	0804.6	3							III
			DURN	0845.2	0846.1	3	0845.2	0846.1	3				IIIGG
			DURN	0850.4	0946.5	3	0858.3	0946.5	2				IV
	1144	2113	SGMR							1144.0	2113.0	1	CONT
	1346	2340	HARV				1354	1623	1				IN
	1330	2400	BOUL				1400	2325	3	1400	2325	3	IV
			HARV				1542	1723	1	1542	1723	1	IIIN
			HARV				1623	1906	1				I
			HARV				1724	1751	2	1724	1751	2	IIIS
			HARV				1751	2007	1	1751	2007	1	IIIS
			HARV				1906	2221	1				IN
			HARV				2007	2159	1	2007	2159	1	IIIN
	2017	2400	CULG	2017	2400	1	2017	2335	1				IS,CONT,DC
			CULG				2017	2400	1	2017	2400	1	IIIS
	2157	2400	MANI							2316.2	2316.6	3	III
			HARV				2317		1	2317		1	IIIG
			CULG	2317	2318	1	2317	2318	2	2317	2318	2	IIIG,V
			CULG				2335	2400	2				IS,CONT,DC
20	0000	0717	CULG	0000	0717	1	0000	0717	2				IS,CONT,DC
			CULG				0000	0600	1	0000	0620	1	IIIS
	0000	0917	MANI							0134.3	0134.5	3	III
			CULG	0135	0135.5	1	0135	0135.5	2	0135	0135.5	2	IIIG
			CULG				0500	0717	1				I
			CULG				0500	0717	2				IIIS
	0701	1535	DURN	0701 E	1535 D	3	0701 E	1535 D	3				IC,N
			DURN	0827.2	0831.4	3	0827.2	0831.4	3				IIIGG
			DURN	1030	1430	3	1030	1430	2				IV
	1145	2112	SGMR							1145.0	2112.0	2	CONT
	1401	2340	HARV				1401	1438	1				I
	1400	2400	BOUL				1404.1	2328	3	1404.1	2328	3	IV
			HARV				1438	1930	2				I
			HARV				1502	1600	1	1502	1600	1	IIIN
			HARV				1544	1547	1	1544	1547	1	IIIG
			HARV				1600	1705	1	1600	1705	1	IIIS
			HARV							1603	2053	1	I
			HARV				1705	1927	2	1705	1927	2	IIIS
			HARV				1927	2108	1	1927	2108	1	IIIS

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NOV 1975	TIMES OF OBSERVATION		STATION	EVENTS										SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT		
20			HARV				1930	2330	1					I
			CULG				2018	2400	2	2018	2400	1		IIIS
	2018	2400	CULG	2018	2400	1	2018	2400	2					IS,CONT,DC
			CULG				2102.5		2	2102.5		2		IIIB,V
			HARV				2102		3	2102		3		IIIB
			HARV				2108	2216	1	2108	2204	1		IIIN
	2157	2400	MANI											
			CULG				2350	2400	1					SCIN
21			CULG				0000	0717	2	0000	0717	1		IIIS
	0000	0717	CULG	0000	0717	1	0000	0400	2					IS,CONT,DC
			CULG				0000	0010	1					SCIN
	0000	0917	MANI							0048.1	0048.3	3		III
			MANI							0107.7	0108.0	3		III
			CULG	0107	0108	2	0107.5	0108.5	2	0107.5	0108.5	2		IIIG
			MANI							0124.5	0507.5	2		CONT
			CULG				0400	0717	1					IS,CONT,DC
			CULG				0440	0450	1					SCIN
			CULG	0448	0449	1	0448	0449	2	0448	0449	2		IIIG
			CULG	0613	0705	2							IV	
			MANI							0615.5	0742.5	3		CONT
			CULG				0616	0621	2	0616	0621	2		IIIGG,V
			CULG							0616	0640			
			CULG	0618	0620	2	0616	0717	2				IV	
			CULG				0620	0632	3	0620	0632	2	IIH	
	0701	1525	DURN	0701 E	1525 D	3	0701 E	1525 D	3					IC,N
	1146	2112	SGMR											
	1400	2340	HARV				1400	2240	1					IN
	1400	2400	BOUL				1401.5	2322	3					IS
			BOUL				1405.5	2310	1	1405.5	2310	1		CONT
			HARV				1700		3	1700		3		IIIB
			CULG				2018	2400						IIIS,W
	2018	2400	CULG	2018	2400	1	2018	2400	1					IS,CONT,DC
	2158	2400	MANI											
22	0000	0917	MANI											
			CULG				0000	0717						IIIS,W
	0000	0717	CULG	0000	0717		0000	0717	1					IS,CONT,DC
	0701	0819	DURN	0701 E	0819 D	2	0701 E	0819 D	2					IC,N
	0943	1526	DURN	0943 E	1526 D	3	0943 E	1526 D	3					IC,N
	1147	2111	SGMR							1215.5	2111.0	1		CONT
	1400	2400	BOUL				1402.1	2322	2	1402.1	2322	2		CONT
	1345	2340	HARV				1441	1553	1					IN
			HARV				1553	1815	2					I
			HARV				1753	2022	1	1753	2022	1		IIIN
			HARV				1815	2330	1					I
			CULG				2018	2400						IIIS,W
	2018	2400	CULG	2018	2400	1	2018	2230	2					IS,CONT,DC
			CULG							2018	2400	1		IIIN
	2159	2400	MANI											
			CULG				2230	2400	1					IS,CONT,DC
23			CULG				0000	0718						IIIS,W
	0000	0718	CULG	0000	0718	1	0000	0718	1					IS,CONT,DC
			CULG							0000	0200	1		IIIN
	0000	0917	MANI											
	0703	1525	DURN	0703 E	0910	2	0703 E	0910	2					I,C,N
	1148	2110	SGMR											
	1345	2340	HARV											
	1400	2130	BOUL							1401.9	1404.1	1		IIIG
	2018	2400	CULG											
	2200	2400	MANI											
24	0000	0917	MANI											
	0000	0719	CULG											
	1150	2110	SGMR											
	1345	2340	HARV											
	1400	2400	BOUL											
	2019	2400	CULG											
	2201	2400	MANI											

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

NOVEMBER 1975

NOV 1975	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
25	0000	0917	MANI										
	0000	0719	CULG										
	1151	2109	SGMR										
	1400	2400	BOUL										
	1402	2340	HARV										
	2019	2400	CULG										
	2201	2400	MANI										
26	0000	0917	MANI										
	0000	0719	CULG										
	1152	2109	SGMR										
	1320	1602	DURN										
	2201	2400	MANI										
	2019	2400	CULG	2205	2255								IS,W
	1400	2400	BOUL				2228.3	2239.2	1				II
			CULG				2229.5	2245	1				II
			BOUL							2231.3	2239.0	1	II
	1401	2340	HARV				2231	2235	1				I
			BOUL				2234.7	2327.6	1	2234.7	2327.6	1	IV
			CULG	2239.5	2240		2233	2235	1				IIIG
			CULG				2239	2400	1				CONT
			CULG				2251	2252	1				UNCL
27	0000	0713	CULG				0000	0035	1				CONT
	0000	0917	MANI										
	1153	2108	SGMR										
	1400	2400	BOUL				2041.1	2041.3	1	2041.1	2041.3	1	III
	1402	2340	HARV				2041		2				IIIB
	2202	2400	MANI										
	2056	2400	CULG				2304	2304.5					IIIG,W
28	0000	0720	CULG										
	0000	0917	MANI										
	1155	2108	SGMR										
	1400	2400	BOUL										
	1401	2340	HARV										
	2020	2400	CULG										
	2203	2400	MANI										
29	0000	0917	MANI										
	0000	0720	CULG										
	1039	1525	DURN										
	1156	2107	SGMR										
	1400	2400	BOUL										
	1401	2340	HARV										
	2020	2400	CULG										
	2203	2400	MANI										
30	0000	0917	MANI										
	0000	0720	CULG										
	1157	2107	SGMR										
	1400	2400	BOUL										
	1401	2340	HARV										
	2020	2400	CULG										
	2204	2400	MANI										

The symbols used in connection with the spectral type in describing the important bursts are as follows:

B = Single burst
G = Small group (< 10) of bursts
GG = Large group (> 10) of bursts
C = Underlying continuum (particularly with type I)
S = Storm in the sense of intermittent but apparently connected activity
N = Intermittent activity in this period
U = U-shaped burst of Type III
RS = Reverse slope burst
DP = Drifting pairs
DC = Drifting Chains
H = Herringbone
W = Weak
P = Pulsations
CONT = Continuum
UNCLF = Unclassified activity

SELECTED SOLAR EVENTS
NOVEMBER 1975

Culgoora

UT Date 1975 NOV.	HELIOGRAPH EVENT							Spectral Type	REMARKS
	Start (UT)	End (UT)	Freq. (MHz)	Positions: Central Dist. ($R_\odot$)	Positions: Position Angle (Deg.)	Polarization	Intensity (1-3)		
3	0221	0223	80	(1.1 / (/ (1.0	70) /) / 120)	0	†	IIIG,U	
13	0203	0206	160	0.7	120	0			
			80	1.2	120	0		IIIG	*
			43.25	1.5	120	-			
14	0404	0416	160	1.3	150	0		)	
			80	1.3	140	0		) IIIGG,V	
			43.25	1.5	120	-		)	
	0412	0419	160	1.3	150	0		)	followed by type IV at approx. same positions
			80	1.3	140	0		) II	
			43.25	1.5	120	-		)	
16	0217	0219	160	0.7	150	0		)	
			80	0.9	140	0		) IIIG	*
			43.25	1.0	130	-		)	
	2240/15	0518	160	0.9	140	R		) (	This source persisted until end of observations on Nov. 21
			80	1.0	140	R		) I (	
18	0310	0312	43.25	1.2	330	-		IIIG	*
19	0327	0335	(80	0.3	330	0	)		
			(43.25	1.1	320	-	)	IIIG	*

Days without Heliograph observations: .....Daily observations.....

* Other type III bursts observed at same position during day.

† Because of equipment modifications which are in progress, intensity classifications are not available. An indication of intensities can be obtained from corresponding entries in "Solar Radio Emission - Spectral Observations"

COSMIC RAY INDICES

(Neutron Monitors)

NOVEMBER 1975

NOV. 1975	THULE Average cts/hr	ALERT Average cts/hr	DEEP RIVER Average cts/hr	CALGARY Average cts/hr	SULPHUR MT Average cts/hr	KIEL Average cts/hr	CLIMAX Average cts/hr	TOKYO Average cts/hr
1	4555.5	7614.7	7109.8	11857.5	9057.1(23)	6390.2	4291.7	3556.9
2	4505.8	7532.0	7042.0	11743.2	-- (0)	6332.9	4265.5	3548.5
3	4472.3	7481.0	7004.6	11684.3	-- (0)	6316.1	4260.3	3551.0
4	4483.5	7484.8	6993.2	11648.3	-- (0)	6289.9	4234.6	3534.1
5	4441.0	7436.6	6934.0	11575.2	-- (0)	6249.1	4177.7	3510.7
6	4444.3	7432.4	6941.3	11586.8	-- (0)	6256.4	4193.1	3507.0
7	4459.3	7453.7	6935.2	11621.7	-- (0)	6249.3	4184.7	3511.1
8	4475.4	7470.4	6980.5	11733.2	8999.2(7)	6274.4	4216.9	3532.2
9	4468.6	7473.1	7021.0	11816.6	8987.6	6317.7	4277.7	3553.8
10	4450.3	7449.1	6987.2	11709.4	8918.0	6293.0	4223.2	3540.3
11	4438.3	7426.1	6977.2	11683.8	8878.4	6272.4	4225.9	3542.2
12	4433.1	7397.2	6965.4	11674.2	8825.4	6265.3	4193.2	3530.4
13	4423.9	7392.2	6946.0	11584.1	8755.8	6247.3	4147.5	3518.4
14	4424.4	7399.1	6970.6	11583.5	8785.8	6232.4	4154.8	3512.8
15	4428.6	7411.1	6980.1	11640.5	8837.3	6238.5	4170.6	3515.2
16	4450.2	7454.3	6984.8	11691.5	8885.2	6309.4	4188.5	3534.0
17	4443.2	7434.0	6951.5	11673.3	8865.8	6304.6	4207.9	3532.9
18	4440.3	7420.0	6950.3	-- (0)	8842.5	6287.0	4215.0(6)	3530.1
19	4411.2	7368.1	6907.4	11632.0(4)	8770.9	6231.8	-- (0)	3513.0
20	4395.0	7342.3	6883.2	11535.3	8745.1	6203.2	-- (0)	3511.2
21	4414.8	7381.5	6886.8	11471.5	8711.6	6201.3	-- (0)	3505.7
22	4400.4	7342.3	6879.9	11440.8	8670.2	6184.4	-- (0)	3513.7
23	4363.3	7288.4	6862.7	11424.3	8665.0	6161.5	-- (0)	3521.8
24	4390.8	7330.4	6909.7	11491.2	8663.8(18)	6199.2	-- (0)	3528.0
25	4421.6	7377.1	6969.2	11613.6	-- (0)	6244.2	4189.5	3537.6
26	4437.1	7391.5	6997.3	11684.4	-- (0)	6276.8	4206.0	3542.1
27	4471.1	7445.6	7012.7	11761.0	-- (0)	6329.5	4238.7	3544.3
28	4501.3	7499.4	7050.4	11851.3	-- (0)	6357.9	4269.1	3554.2
29	4468.2	7449.3	6997.2	11742.1	8942.3(7)	6327.3	4261.2	3548.3
30	4473.4	7448.3	6961.2	11697.0	8940.0(7)	6306.9	4231.4	3553.8
MEAN	4446.2	7427.5	6966.4	11650.1	8837.4	6271.7	4217.7	3531.2

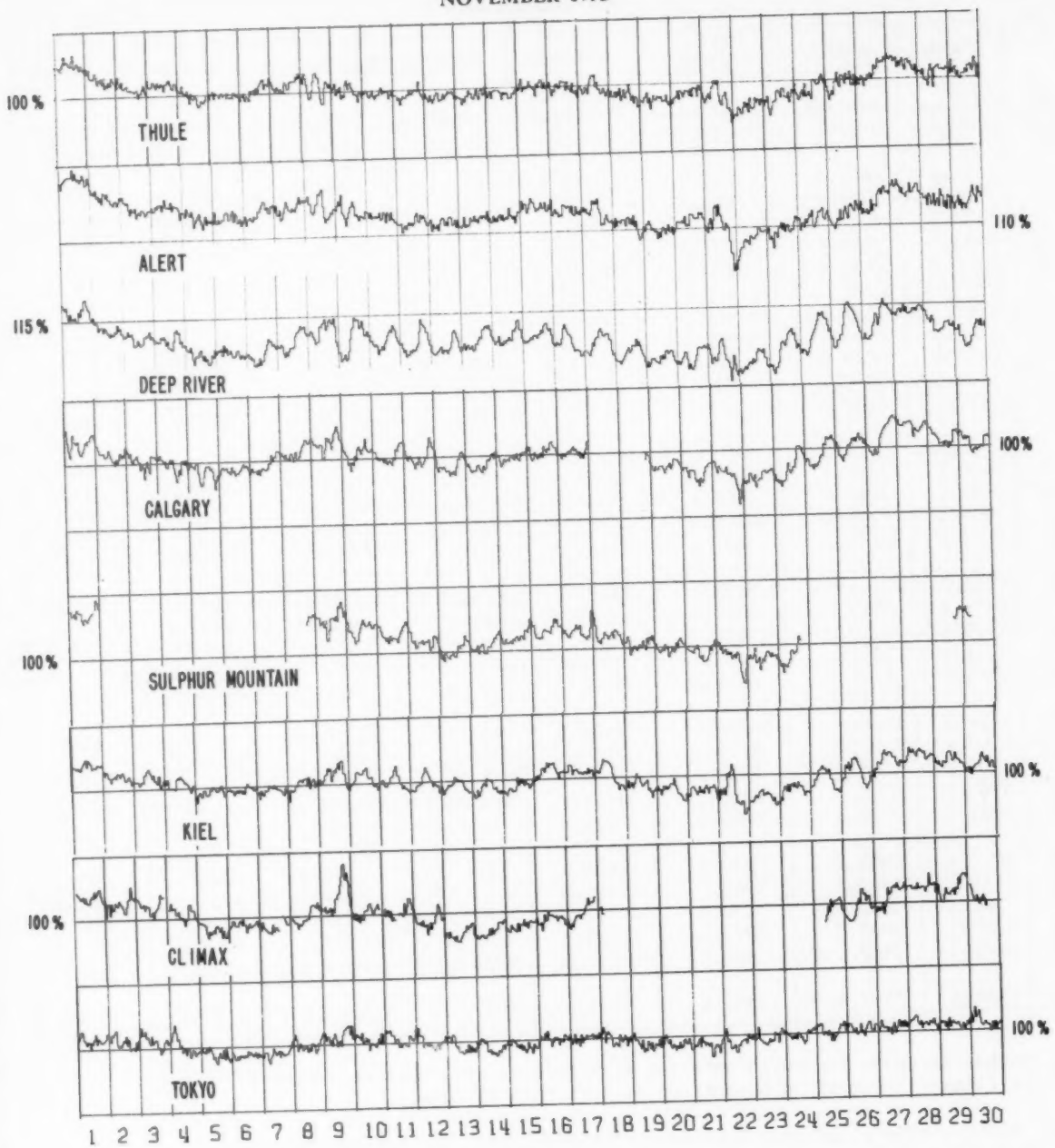
( ) Number of hours for which data are available if less than 24. Number of Section Hours at Climax if sum of both sections is less than 40 hours.

Thule, Alert, Calgary, Sulphur Mountain, Kiel and Climax Scaling Factors = 100.
Deep River Scaling Factor = 300.
Tokyo Scaling Factor = 128.

COSMIC RAY INDICES

(Neutron Monitors)

NOVEMBER 1975

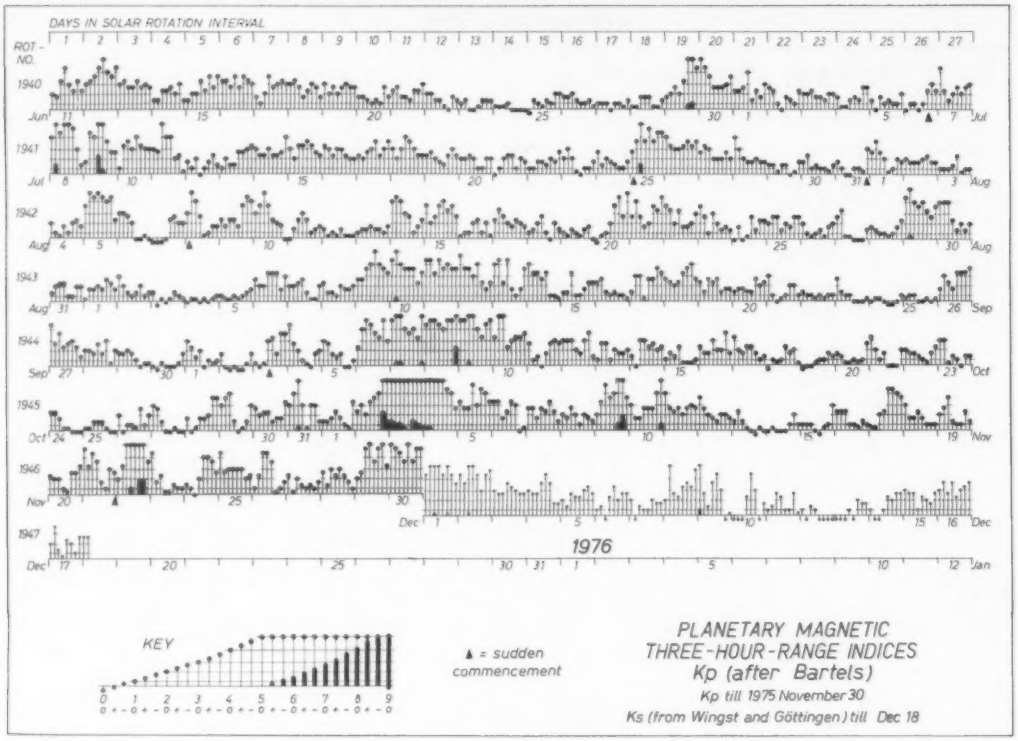


GEOMAGNETIC ACTIVITY INDICES

NOVEMBER 1975

Day		Three-Hour Range Indices Kp										aa			
		1	2	3	4	5	6	7	8	Sum	Cp	Ap	N	S	M
1	Q	1+	1+	2-	2+	2-	1	1-	3+	13+	0.4	7	15	18	12 21
2	D	2+	3	2	3+	4-	4	7-	6	31	1.4	36	48	46	24 71
3	D	6	6-	6-	5+	5	6	6-	5+	45-	1.7	65	75	76	75 76
4	D	5+	5+	5	5	5	4+	4	3-	37-	1.5	41	60	52	58 54
5		3+	3-	3-	5-	3	4+	4	3+	28	1.1	22	43	37	39 41
6		3+	3+	2-	2+	3+	3	0+	1-	18	0.6	11	21	23	23 21
7		3-	3-	2-	3-	2+	3+	2+	1+	19	0.6	10	20	24	19 26
8	Q	2	2-	3-	2	1	2	2-	1+	14+	0.3	7	14	11	13 12 C
9		2	3+	5-	4-	4	6-	6+	4-	33+	1.4	37	52	60	40 72
10		3	2-	2-	3-	3-	3-	4	6-	24	1.0	20	38	28	18 49
11		4	3-	2+	3-	2	3-	3	3-	22	0.8	13	27	32	24 34
12		4-	3-	2	2-	1+	2	2	2-	17	0.5	9	16	16	19 14
13	QQ	1+	2+	1+	1-	0+	0	1-	0+	7	0.1	4	7	8	9 6 CC
14	QQ	0+	1-	0+	0+	0+	1	2	1	6	0.1	3	7	11	8 11 CC
15	QQ	1	1	1	0+	0	1-	1	3	8	0.2	4	9	9	8 10 CC
16	QQ	2+	2+	2+	1	1	1-	1+	1	12	0.3	6	11	12	12 11 CC
17		1-	1-	2	2+	4+	4+	4	4-	22	0.9	17	36	30	13 52
18	Q	3	2-	2-	2+	2-	1	1	1	13+	0.3	7	13	15	19 9
19	Q	2	3-	4-	1+	1	1	2+	1+	15+	0.5	8	15	15	18 13
20		2+	2	2	1	1-	3-	3-	3+	17-	0.5	9	23	16	16 24
21		5-	3+	4+	4-	2-	1	3	3-	24+	1.0	18	29	26	34 21
22	D	2	3+	5	6-	5	6+	6+	4-	37+	1.6	50	85	89	55 120
23	Q	4+	2-	2+	1-	1-	1+	1	1	13	0.4	8	14	12	19 8 K
24		1+	1	0+	2	4	4	4-	3-	19	0.8	13	24	29	12 40
25		4+	3-	3	3	3	3	2	2+	23+	0.8	15	24	23	25 23
26		1	2+	4+	4+	4-	1-	1	2-	19	0.8	14	19	36	41 15
27	QQ	2+	1-	2	1+	1	1+	1	2-	11+	0.2	5	12	9	12 10 C
28		3-	1+	3	2+	3	2+	2-	1	17+	0.5	9	16	19	19 16
29		2	3-	5-	5	4-	5-	5	3+	31	1.3	29	53	47	39 62
30	D	5	5-	4+	4-	5	4-	5-	5-	36-	1.4	36	52	49	39 62
										MEAN	0.77	18	29.3	29.4	29.4

GEOMAGNETIC ACTIVITY INDICES



DAILY AVERAGE INDICES Ap

	1974	1975									
DAY	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV
1	6	7	37	21	7	6	24	12	9	7	6	7
2	15	4	23	10	5	16	28	6	7	6	2	36
3	15	7	12	11	6	19	12	7	5	3	11	65
4	9	32	10	9	7	14	11	6	6	3	9	41
5	7	27	17	30	10	34	12	5	29	4	6	22
6	4	26	8	20	15	35	11	6	7	13	25	11
7	8	44	15	3	25	22	6	12	5	7	38	10
8	13	36	8	2	32	14	4	37	14	6	45	7
9	42	7	11	8	52	16	5	35	15	24	37	37
10	20	6	38	80	35	19	4	17	15	26	24	20
11	21	4	36	53	34	2	14	18	7	26	8	13
12	18	4	35	37	27	3	27	5	4	19	12	9
13	22	32	27	29	29	6	14	10	5	17	7	4
14	13	33	25	29	21	14	8	13	16	13	9	3
15	14	15	21	20	7	3	13	15	18	8	5	4
16	8	21	30	27	6	28	17	12	5	6	10	6
17	18	29	14	13	5	14	12	14	9	13	8	17
18	28	22	15	17	6	7	12	15	6	14	4	7
19	27	10	11	11	5	15	12	9	4	8	3	8
20	21	10	8	14	25	23	6	6	15	7	5	9
21	19	6	8	3	23	12	9	6	17	6	6	18
22	14	8	7	6	15	11	5	6	12	4	6	50
23	17	12	32	13	25	8	4	6	10	4	7	8
24	14	10	17	14	17	5	3	6	6	2	4	13
25	12	5	20	8	8	14	4	33	9	3	4	15
26	12	5	9	17	9	18	5	19	5	14	5	14
27	21	14	5	34	5	10	4	11	6	14	5	5
28	12	12	12	38	3	5	4	10	5	8	9	9
29	11	6		22	2	11	26	4	27	5	12	29
30	6	7		10	6	6	22	5	14	2	9	36
31	14	16		13		4		5	6		19	
MEAN	15	16	18	20	16	13	11	12	10	10	12	18

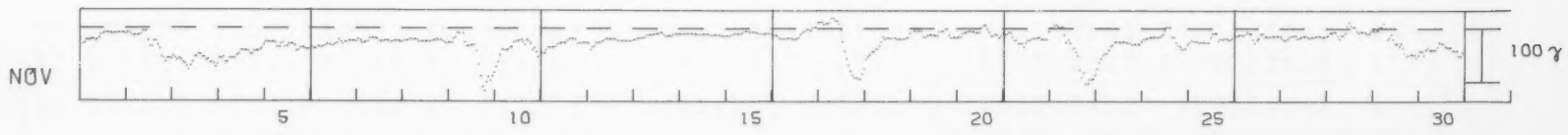
HOURLY EQUATORIAL Dst VALUES (PROVISIONAL)

NOVEMBER 1975

NASA/GODDARD SPACE FLIGHT CENTER

(Time-UT) (Units-Gammas)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	-28	-27	-23	-22	-23	-20	-20	-23	-22	-18	-12	-10	-8	-8	-8	-10	-12	-9	-9	-8	-10	-8	-8	-11
2	-7	-8	-12	-15	-13	-14	-13	-10	-6	-5	-5	-23	-34	-33	-24	-24	-31	-37	-53	-56	-63	-57	-57	-56
3	-52	-55	-58	-56	-59	-63	-66	-70	-76	-70	-63	-54	-54	-49	-50	-54	-53	-59	-57	-64	-62	-66	-71	-67
4	-56	-56	-53	-63	-64	-56	-57	-55	-56	-51	-48	-42	-41	-43	-43	-42	-48	-49	-43	-43	-42	-39	-36	-31
5	-26	-25	-27	-26	-27	-26	-34	-36	-29	-26	-34	-34	-30	-30	-30	-33	-42	-41	-37	-36	-38	-40	-38	-37
6	-35	-38	-38	-34	-34	-36	-33	-31	-29	-30	-32	-33	-29	-27	-21	-24	-28	-25	-25	-23	-24	-23	-24	-23
7	-20	-23	-27	-26	-26	-24	-19	-18	-18	-20	-21	-24	-26	-24	-22	-24	-24	-27	-24	-23	-23	-24	-26	-25
8	-22	-23	-22	-20	-21	-21	-22	-23	-25	-24	-25	-25	-25	-25	-24	-22	-22	-20	-21	-21	-23	-26	-28	-27
9	-27	-26	-20	-16	-9	-10	-1	-8	-25	-33	-32	-31	-30	-29	-42	-66	-89	-108	-114	-99	-90	-94	-88	-81
10	-70	-62	-48	-40	-40	-41	-40	-36	-34	-26	-23	-23	-21	-21	-25	-29	-22	-24	-28	-40	-36	-43	-53	-45
11	-47	-46	-41	-36	-35	-36	-34	-32	-29	-27	-26	-26	-25	-22	-19	-18	-18	-21	-27	-26	-26	-25	-25	-25
12	-28	-39	-34	-31	-27	-26	-24	-23	-21	-19	-20	-20	-21	-19	-19	-23	-23	-24	-24	-24	-24	-23	-22	-21
13	-20	-18	-17	-16	-16	-15	-12	-13	-13	-12	-10	-9	-9	-7	-9	-11	-14	-14	-15	-13	-10	-9	-11	-11
14	-10	-10	-9	-9	-9	-9	-10	-11	-12	-10	-10	-11	-11	-11	-11	-13	-12	-12	-11	-11	-14	-15	-15	-14
15	-14	-14	-11	-10	-8	-10	-11	-9	-7	-5	-5	-5	-7	-8	-8	-9	-9	-10	-11	-10	-10	-8	-8	-12
16	-14	-13	-15	-18	-20	-18	-19	-19	-17	-19	-21	-21	-18	-16	-11	-7	-4	-2	-1	-4	1	2	2	11
17	12	13	8	9	9	12	19	18	15	13	9	-4	-24	-42	-56	-68	-79	-85	-90	-91	-93	-93	-84	-74
18	-57	-52	-48	-44	-42	-38	-36	-32	-25	-15	-19	-16	-19	-18	-17	-19	-20	-21	-19	-18	-19	-17	-16	-9
19	-1	-4	-4	-6	-6	-6	-15	-17	-13	-11	-13	-14	-13	-11	-6	-6	-5	-1	-1	-11	-16	-17	-18	-17
20	-15	-14	-9	-8	-6	-4	-4	-7	-7	-9	-8	-6	2	6	5	0	-6	-13	-13	-10	-13	-17	-14	-9
21	-12	-10	-7	-8	-15	-21	-22	-27	-26	-28	-33	-27	-22	-21	-19	-17	-18	-18	-16	-20	-20	-21	-20	-6
22	0	-1	6	5	3	0	3	-12	-26	-22	-27	-39	-36	-43	-50	-77	-90	-82	-102	-101	-94	-95	-92	-86
23	-73	-62	-56	-50	-46	-45	-41	-33	-30	-26	-25	-26	-27	-25	-24	-24	-27	-27	-30	-29	-30	-30	-30	-25
24	-20	-20	-18	-16	-18	-15	-16	-17	-16	-14	-11	-4	1	2	0	-15	-17	-26	-30	-34	-38	-38	-36	-30
25	-26	-22	-24	-24	-23	-27	-25	-26	-26	-25	-25	-16	-10	-10	-10	-23	-19	-21	-18	-17	-21	-22	-18	-16
26	-14	-14	-12	-12	-14	-10	-7	-10	-9	-20	-25	-22	-18	-11	-11	-15	-15	-16	-15	-14	-14	-15	-14	-14
27	-19	-22	-21	-18	-15	-14	-13	-15	-18	-17	-15	-14	-14	-16	-18	-16	-16	-15	-14	-15	-16	-17	-16	-14
28	-13	-9	-8	-6	-8	-13	-18	-14	-11	-8	5	11	6	2	3	-3	-7	-6	-6	-8	-10	-11	-5	-4
29	-4	-5	-3	1	3	10	1	-20	-16	-11	-19	-28	-29	-33	-29	-35	-46	-51	-49	-48	-50	-50	-54	-50
30	-43	-42	-49	-40	-36	-40	-42	-40	-39	-35	-27	-28	-29	-33	-36	-37	-36	-41	-43	-42	-51	-53	-46	-37



PRINCIPAL MAGNETIC STORMS

NOVEMBER 1975

OBS. 2 letter IAGA code	GEOMAG-NETIC LATI-TUDE	COMMENCEMENT DAY	hr min (UT)	TYPE	SC - AMPLITUDES D(')	H(γ)	Z(γ)	MAXIMUM 3 HOUR - INDEX K DAY(3 HOUR PERIOD)	K	RANGES D(')	H(γ)	Z(γ)	UT END DAY	HOUR
MB	21.3N	1	22--	..	..	..	..	02(7) 03(6) 04(1)	5	4	41	27	06	03
HO	07.6N	1	2200	..	..	..	..	02(5,6,7) 03(4,5,6,7) 04(5) 05(4,6)	5	6	147	21	05	22
CO	64.6N	2	09--	..	..	..	..	03(4)	8	495	2860	1780	05	24
SI	60.0N	2	09--	..	..	..	..	03(4)	-	140	--	--	04	16
NE	55.1N	2	03--	..	..	..	..	03(3,4)	7	59	286	435	06	18
WI	54.2N	2	15--	..	..	..	..	02(7) 03(6)	7	45	260	105	05	22
FR	49.6N	2	15--	..	..	..	..	04(1)	6	35	160	95	06	07
BD	48.9N	2	09--	..	..	..	..	03(3)	6	45	136	120	06	08
TU	40.4N	2	15--	..	..	..	..	03(3,4) 04(1)	6	22	120	25	05	01
SJ	29.9N	2	1100	..	..	..	..	02(7)	6	6	126	35	04	24
HO	21.9N	2	08--	..	..	..	..	03(3)	5	8	94	29	04	--
AL	09.5N	2	04--	..	..	..	..	02(4,6,7,8) 03(4,5,6,7) 04(5,6)	5	6	145	22	04	20
GU	04.0N	2	0839	..	..	..	..	03(4)	5	0	80	20	04	17
AN	01.5N	2	04--	..	..	..	..	--	-	5	157	54	04	20
HU	00.6S	2	1059	..	..	..	..	02(6)	6	11	220	34	04	21
TV	01.1S	2	04--	..	..	..	..	--	-	4	178	83	04	20
AP	16.0S	2	08--	..	..	..	..	03(3)	5	6	101	29	06	01
PM	18.7S	2	07--	..	..	..	..	02(4) 03(4,6) 04(4)	5	6	110	50	06	17
HR	33.7S	2	08--	..	..	..	..	02(6,7,8) 03(6,7)	5	27	115	96	04	21
GN	43.2S	2	06--	..	..	..	..	03(5,6,7) 04(4,5)	6	20	110	120	04	21
TO	46.7S	2	11--	..	..	..	..	03(4)	6	22	140	80	04	21
KG	56.5S	2	09--	..	..	..	..	02(7) 03(6)	9	--	--	--	06	18
CO	64.6N	9	07--	..	..	..	..	09(6)	8	429	1940	1350	09	22
SI	60.0N	9	07--	..	..	..	..	09(6)	7	100	580	480	09	21
NE	55.1N	9	01--	..	..	..	..	09(3,6,7)	5	38	206	96	12	08
WI	54.2N	9	07--	..	..	..	..	09(6,7)	6	45	205	200	10	02
BD	48.9N	9	0753	SC*	4	55	-18	09(6)	5	17	194	40	10	08
SJ	29.9N	9	0151	..	..	..	..	09(6)	6	5	167	22	11	07
HO	21.9N	9	01--	..	..	..	..	09(6)	5	8	67	17	--	--
MB	21.3N	9	0150	..	..	..	..	09(7) 10(8)	5	4	90	10	11	06
AL	09.5N	9	01--	..	..	..	..	09(6)	6	4	246	22	09	22
HO	07.6N	9	0200	..	..	..	..	09(6)	6	4	247	15	11	01
GU	04.0N	9	0148	..	..	..	..	09(3)	5	0	110	20	11	05
AN	01.5N	9	01--	..	..	..	..	--	-	3	255	64	09	22
HU	00.6S	9	0147	..	..	..	..	09(6)	6	10	271	45	10	24
TV	01.1S	9	01--	..	..	..	..		-	5	266	117	09	22
HR	33.7S	9	02--	..	..	..	..	09(6,7) 10(8)	6	33	191	174	10	03
GN	43.2S	9	03--	..	..	..	..	09(7)	7	27	110	130	10	07
TO	46.7S	9	03--	..	..	..	..	09(3,6,7)	5	30	140	110	09	22
HO	07.6N	16	1800	..	..	..	..	17(6)	6	5	228	12	18	18
CO	64.6N	17	08--	..	..	..	..	17(5,6)	7	338	1320	1260	17	24
NE	55.1N	17	08--	..	..	..	..	17(5,6)	5	29	98	83	18	03
AL	09.5N	17	06--	..	..	..	..	17(5)	6	4	216	21	17	20
AN	01.5N	17	06--	..	..	..	..	--	-	3	235	36	17	20
TV	01.1S	17	06--	..	..	..	..	--	-	2	254	--	17	20
HR	33.7S	17	04--	..	..	..	..	17(5,6)	5	18	170	106	18	12
NE	55.1N	20	20--	..	..	..	..	22(4)	7	47	313	275	24	01
BD	48.9N	20	19--	..	..	..	..	22(6)	6	30	206	106	23	08
WI	54.2N	21	2305	SC	- 2	+26	0	22(6,7)	7	52	295	90	23	01
FR	49.6N	21	2305	SC*	- 0.5	+12	- 2	22(3,4,5,6,7)	5	18	190	80	23	01
TU	40.4N	21	23--	..	..	..	..	22(4,6)	6	15	175	20	23	03
HO	21.9N	21	2304	SC	- 0	+ 5	+ 3	22(4)	5	8	94	29	22	22
AL	09.5N	21	2304	SC	- 0.4	10	- 4	22(6)	6	5	208	26	22	20
HO	07.6N	21	2306	SC	- 0.3	+10	- 1	22(6)	6	5	214	14	23	01
GU	04.0N	21	2305	SC	--	15	-04	22(6)	6	0	140	20	22	21
AN	01.5N	21	2304	SC	- 0.5	12	..	--	-	4	200	59	22	20
TV	01.1S	21	2304	SC	0.0	10	12	--	-	3	198	--	22	20
PM	18.7S	21	2304	SC*	- 0.9*	+12	+ 8	22(4,6)	6	7	120	60	22	22
HR	33.7S	21	2304	SC	+ 1	+13	+ 9	22(6)	6	37	173	155	23	01
CO	64.6N	22	06--	..	..	..	..	22(4)	8	610	2440	1720	22	21
SI	60.0N	22	06--	..	..	..	..	22(4)	-	190	--	640	22	22
HU	00.6S	22	0210	..	..	..	..	22(7)	6	10	276	39	23	01
AP	16.0S	22	00--	..	..	..	..	22(4)	5	5	141	17	23	02
GN	43.2S	22	02--	..	..	..	..	22(6)	7	28	110	170	22	23
TO	46.7S	22	03--	..	..	..	..	22(4,5,6)	6	30	180	110	22	23
HO	07.6N	23	0632	SC	- 0.1	+ 3	0	24(5)	5	1	69	16	24	22
PM	18.7S	23	0631	SC	+ 0.3	+ 6	+ 5	26(3,4)	5	5	70	50	27	00

PRINCIPAL MAGNETIC STORMS

NOVEMBER 1975

OBS. 2 letter IAGA code	GEOMAG-NETIC LATI-TUDE	COMMENCEMENT DAY	COMMENCEMENT hr min (UT)	TYPE	SC - AMPLITUDES D(')	SC - AMPLITUDES H(γ)	SC - AMPLITUDES Z(γ)	MAXIMUM 3 HOUR - INDEX K DAY(3 HOUR PERIOD)	K	RANGES D(')	RANGES H(γ)	RANGES Z(γ)	UT END DAY	UT END HOUR
HU	00.6S	24	1050	..	..	..	..	24(5,6)	5	08	177	37	25	24
HD	07.6N	25	1200	..	..	..	..	25(6) 26(4)	4	2	91	16	26	24
CO	64.6N	29	07--	..	..	..	..	29(4) 01(4) 02(3)	7	314	1380	1070	03	02
SI	60.0N	29	06--	..	..	..	..	29(4)	7	70	460	460	03	01
NE	55.1N	29	04--	..	..	..	..	01(4)	6	46	161	179	04	20
WI	54.2N	29	07--	..	..	..	..	29(6,7) 30(7)	6	50	195	90	30	24
FR	49.6N	29	04--	..	..	..	..	29(3,4) 30(1,5) 01(1,2,8) 02(4)	5	35	110	50	03	02
BO	48.9N	29	04--	..	..	..	..	30(5)	6	36	125	126	03	04
TU	40.4N	29	04--	..	..	..	..	29(3,4,7) 30(1,2,5) 01(1,2,4) 02(4)	5	19	120	25	03	03
SJ	29.9N	29	0434	SC	--	6	--	29(6)	5	8	90	25	01	06
HO	21.9N	29	04--	..	..	..	..	30(5)	5	5	89	13	--	--
AL	09.5N	29	04--	..	..	..	..	29(3,4,7)	5	3	145	23	29	21
HD	07.6N	29	0430	..	..	..	..	29(3,4,5,6,7) 30(5) 01(6)	5	5	156	21	03	01
GU	04.0N	29	0433	..	..	..	..	29(3)	5	0	90	20	30	24
AN	01.5N	29	04--	..	..	..	..	--	-	4	161	65	29	21
HU	00.6S	29	0432	..	..	..	..	29(6)	6	10	191	29	30	24
TV	01.1S	29	04--	..	..	..	..	--	-	4	180	127	29	21
PM	18.7S	29	04--	..	..	..	..	30(1)	5	6	100	50	03	00
HP	33.7S	29	04--	..	..	..	..	29(3,4,6) 30(5,7)	5	25	109	106	12	03
GN	43.2S	29	04--	..	..	..	..	29(4,6) 30(5,8) 01(5,6)	5	16	90	130	02	18
KG	56.5S	29	06--	..	..	..	..	06(6)	7	--	--	12	03	06

Reports were received from the following observatories:

College Witteveen Tucson Honolulu Guam Huancayo Apia Hermanus Toolangi
Sitka Fredericksburg San Juan Alibag Annamalainagar Trivandrum Port Moresby Gnangara Port-aux-Francais
Newport Boulder M'Bour Hyderabad

SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS

NOVEMBER 1975

PRELIMINARY REPORT ON RAPID MAGNETIC VARIATIONS (by Dr. A. Romana)

The meaning of the station symbols is given in the IAGA-Bulletins nr. 12 and 32. Times of ssc and si are mean values. If given by ten or more stations they are underlined.

Sudden commencements followed by a magnetic storm or a period of storminess (ssc)

21 2305 A: LG LM; B: IK CI FR QU BA PM HU PP DU; C: NI VI CF (si: B: NU PE; C: TL?)

Sudden impulses found in the magnetograms (si)

23 0631 A: SO NU LG FR; B: DO WN IK; C: ES? NI (ssc: B: VI QU BA PM HU; C: PP)

Solar-flare effects (sfe)

Effects confirmed by ionospheric or solar observations are underlined.

07 1517 - 1524 LG

11 1033 - 1119 NI (si: C: LM)

21 0957 - 1027 TL? QU

RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

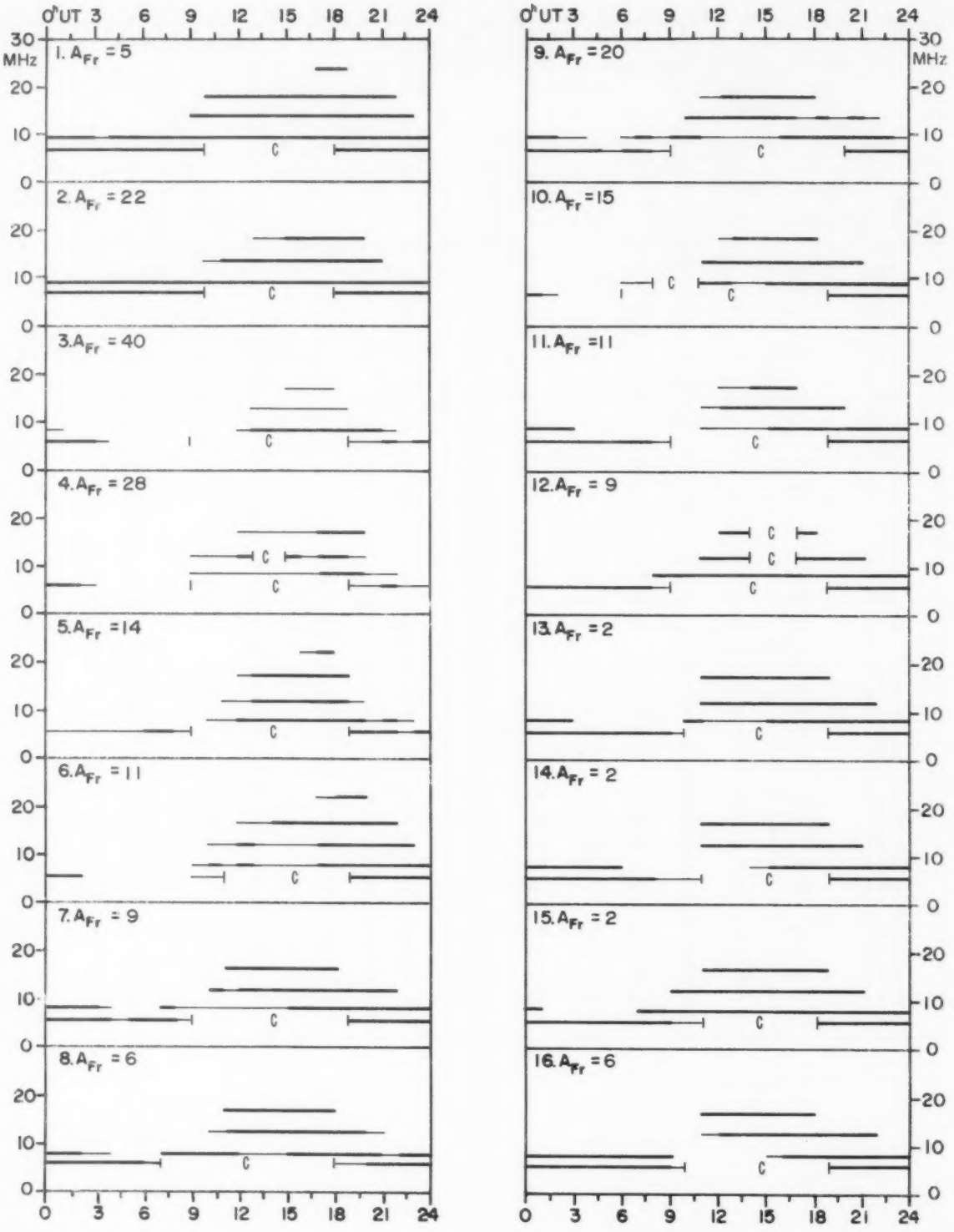
NOVEMBER 1975

North Atlantic

NOV 1975	WHOLE DAY INDICES NORTH ATLANTIC	ADVANCE FORECASTS (JC-REPORTS) FOR WHOLE DAY	NORTH ATLANTIC 6-HOURLY QUALITY FIGURES 00 TO 06	06 TO 12	12 TO 18	18 TO 24	SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF 02	08	14	20	GEOMAGNETIC INDICES K_{FR} HALF DAY (1)	(2)	A_{FR} OBSERVED
01	6o	6	5+	6o	7-	6+	5	5	5	5	2	1	5
02	6o	5	6o	6o	6o	6o	5	5	5	5	3	(4)	22
03	5-	5	5o	4+	5o	4+	4	3	4	4	(5)	(5)	40
04	5-	4	4+	5-	5o	5o	3	3	4	4	(5)	3	28
05	5o	4	5-	4+	6o	5o	4	4	5	5	3	3	14
06	5-	5	5o	3+	5+	5+	4	4	5	5	3	2	11
07	5o	5	5+	4+	5+	5-	5	5	5	6	2	2	9
08	5o	5	5o	5o	5o	5+	5	5	5	6	2	1	6
09	5+	6	5+	5o	5+	5+	5	5	4	5	3	(4)	20
10	6-	6	5+	5o	6+	6-	4	4	4	5	2	3	15
11	6-	6	6-	5+	6+	6-	5	5	5	6	3	2	11
12	6-	6	6o	5+	6-	6-	5	5	5	6	3	2	9
13	6-	6	6-	5o	6-	6o	6	6	6	6	1	0	2
14	6-	6	5+	5o	6+	6+	5	5	6	6	0	1	2
15	6+	6	6o	6+	6+	6o	6	6	6	6	1	1	2
16	6+	6	6o	6+	6+	6o	6	6	6	6	2	1	6
17	6o	6	6o	7-	6o	6o	5	5	5	5	2	3	10
18	6+	6	6-	6+	7-	6+	5	5	5	6	2	1	6
19	6o	6	6o	6o	7-	6-	5	5	5	6	3	1	9
20	6o	6	6o	6+	6o	6-	6	5	6	6	2	2	5
21	6-	6	6-	6-	7-	5+	5	5	5	5	(4)	2	17
22	5+	6	5o	5+	6o	5+	5	5	5	4	(4)	(5)	34
23	6-	6	5+	5+	6o	6-	3	3	5	5	2	1	5
24	6-	6	6-	5+	6o	6-	5	5	5	5	1	3	10
25	6-	6	6-	5-	6-	6-	5	5	5	5	3	3	16
26	6-	6	5o	5+	6o	6o	5	5	4	5	3	2	9
27	6-	5	6o	6-	6-	6o	5	5	5	6	2	1	5
28	5+	5	6-	5o	6o	5o	5	5	5	5	3	2	11
29	6-	4	5+	6o	6+	5+	5	5	5	5	(4)	(4)	24
30	5+	4	5o	5+	6o	6-	4	4	4	4	(4)	(4)	28

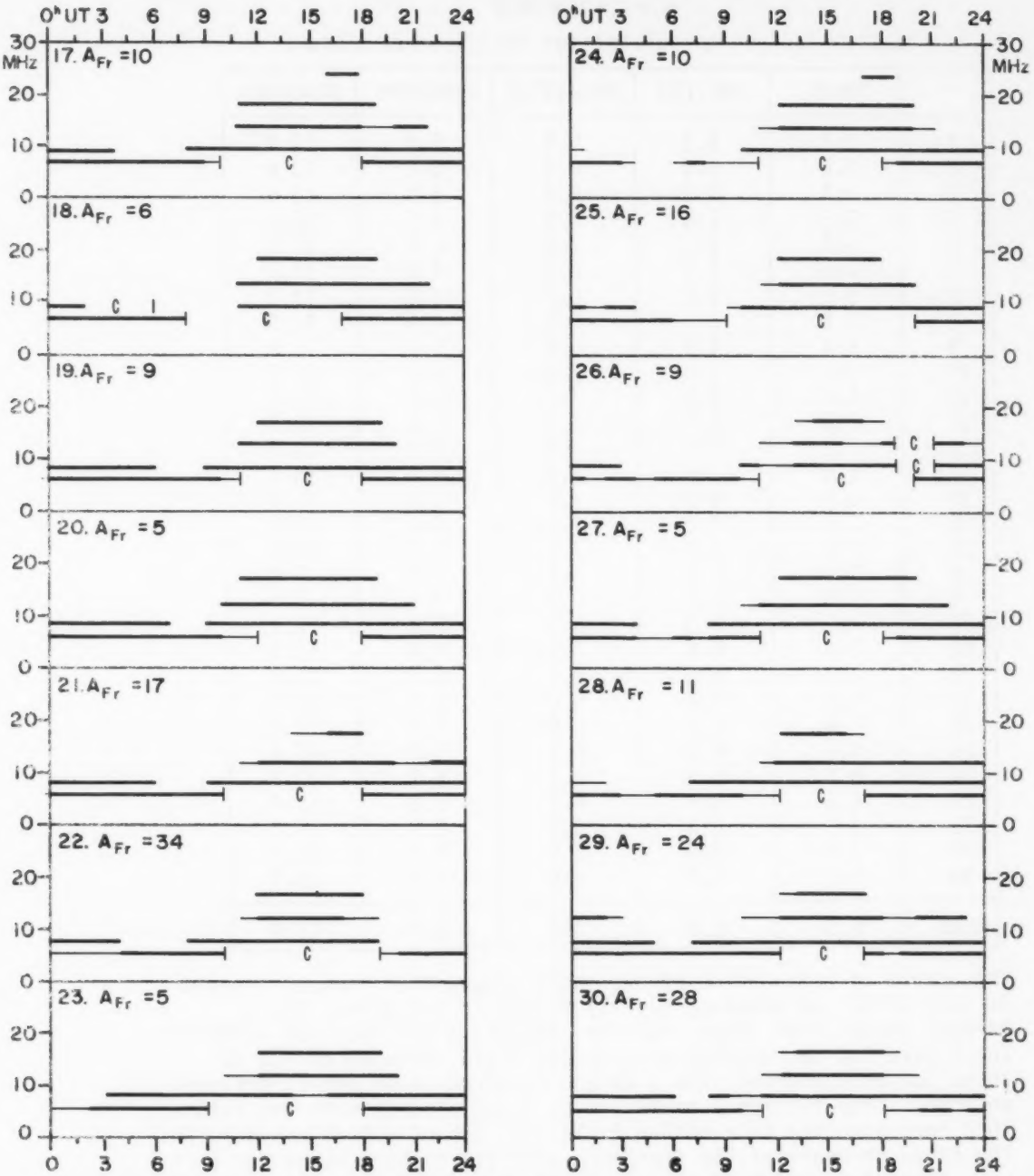
TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

NOVEMBER 1975



TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

NOVEMBER 1975



Field strengths from five frequencies, 6.425, 8.542, 12.813, 17.084 and 22.378 MHz, observed on a Lüchow - Halifax circuit are represented above. Heavy solid lines represent field strengths ≥-12 dB above 1 μv/m (transmitter power reduced to 1 kW). Observed field strengths between -12 dB above 1 μv/m and -40 dB above 1 μv/m are represented by the fine line.

Adapted from Observations by Deutsche Bundespost

RADIO PROPAGATION QUALITY INDICES

NOVEMBER 1975

Quality Indices calculated for reception at Lüchow

	TOKYO	HALIFAX	MAURITIUS	CANBERRA	BRACKNELL
1	7.2	8.5	9.4	5.1	13.8
2	7.0	6.3	8.9	5.2	13.6
3	5.4	3.0	8.3	5.0	13.4
4	5.5	2.8	6.9	4.7	12.3
5	5.8	4.1	7.8	4.7	12.9
6	4.8	4.8	8.2	4.5	12.2
7	6.0	5.2	9.2	5.0	13.3
8	7.3	6.4	8.1	4.9	12.9
9	5.4	4.5	9.4	5.0	12.8
10	6.0	6.3	7.9	4.7	13.6
11	6.6	6.0	7.7	4.9	13.5
12	7.0	6.4	7.5	5.2	13.7
13	7.2	7.1	7.6	5.3	13.7
14	6.8	7.6	6.6	6.2	13.1
15	6.9	8.0	7.2	5.4	14.4
16	7.3	7.6	7.4	6.0	13.7
17	7.8	7.3	7.4	5.8	13.6
18	7.4	7.7	6.5	5.5	13.4
19	7.0	7.3	6.0	5.4	13.5
20	7.0	7.0	6.3	5.5	12.1
21	7.0	6.6	6.5	5.4	13.2
22	7.3	6.0	6.3	5.7	13.6
23	7.2	5.4	6.0	4.5	13.5
24	6.0	5.7	6.9	5.4	13.8
25	5.5	4.9	6.8	5.0	13.1
26	6.3	5.2	6.7	5.1	13.9
27	6.6	5.4	6.7	5.2	13.4
28	5.8	6.4	6.0	5.3	14.2
29	7.0	6.0	6.9	5.4	14.0
30	5.7	5.5	6.6	4.8	13.3
MEAN	6.5	6.0	7.3	5.2	13.4

The method of calculation of the radio propagation indices changed in July 1974. An absolute quality figure is calculated for a 24-hour period from Tokyo, Halifax, Mauritius (Africa) and Canberra. The figure 0.0 corresponds to a median field strength of -30 dB above 1μV/m (converted into 1 kW and referred to an omnidirectional antenna). The figures 1 to 10 are in steps of 5 dB with the figure 10.0 corresponding to a median field strength of +20 dB above 1uV/m. The field strength of the frequency with the highest value for each hour is used in place of a mean of all recorded frequencies. This is done on the assumption that the optimum frequency would be used for communication.

USCOMM-NOAA-ASHEVILLE---1-30-76--950

AMERICAN REVOLUTION BICENTENNIAL
1776-1976